Journal of Urban Health: Bulletin of the New York Academy of Medicine Vol. 78, No. 4, December 2001

The Acceptability of the Female Condom: Perspectives of Family Planning Providers in New York City, South Africa, and Nigeria

Joanne E. Mantell, Susie Hoffman, Eugene Weiss, Lawrence Adeokun, Grace Delano, Temple Jagha, Theresa M. Exner, Zena A. Stein, Quarraisha Abdool Karim, Elma Scheepers, Kim Atkins, and Ellen Weiss

ABSTRACT *This article seeks to fill the gap in female condom acceptability research by examining family planning (FP) providers' attitudes and experiences regarding the female condom in three countries (South Africa, the US, and Nigeria) to highlight providers' potential integral role in the introduction of the female condom. The case studies used data drawn from three independent projects, each of which was designed to study or to change FP providers' attitudes and practices in relation to the female condom. The case study for New York City used data from semistructured interviews with providers in one FP consortium in which no special female condom training had been undertaken. The data from South Africa were drawn from transcripts and observations of a female condom training program and from interviews conducted in preparation for the training. The Nigerian study used observations of client visits before and after providers were trained concerning the female condom. In New York City, providers were skeptical about the contraceptive efficacy of the female condom, with only 8 of 22 providers (36%) reporting they would recommend it as a primary contraceptive. In South Africa, providers who had practiced insertion of the female condom as part of their training expressed concern about its physical appearance and effects on sexual pleasure. However, they also saw the female condom as a tool to empower clients to increase their capacity for self-protection. Structured observations of providers' counseling interactions with clients following training indicated that Nigerian providers discussed the female condom with clients in 80% of the visits observed. Despite the lack of a uniform methodology, the three case studies illuminate various dimensions of FP providers' perceptions of the acceptability of the female condom. FP providers must be viewed as a critical factor in female condom acceptability, uptake, and continued use. Designing training programs and other interventions that address sources of provider resistance and enhance providers' skills in teaching female condom negotiation strategies may help to increase clients' use of the female condom.*

Drs. Mantell, Hoffman, Exner, and Stein are with the HIV Center for Clinical and Behavioral Studies, New York State Psychiatric Institute and Columbia University, New York, New York; Dr. Abdool Karim is with the Joseph Mailman School of Public Health, Columbia University, Division of Epidemiology, New York, New York; Drs. Weiss and Adeokun, Ms. Delano and Mr. Jagha are with the Association for Reproductive and Family Health, Ibadan, Oyo State, Nigeria; Ms. Scheepers is with the Department of Public Works, Community Development Programme, Pretoria, South Africa; Mr. Atkins is with the Community HealthCare Network, New York, New York; and Ms. Weiss is with the International Center for Research on Women and Horizons, Washington, DC.

Correspondence: Dr. Joanne Mantell, HIV Center for Clinical and Behavioral Studies, New York State Psychiatric Institute/Columbia University, 1051 Riverside Drive, Unit 15, New York, NY 10032. (E-mail: jmantell@cnvlz.com)

KEYWORDS *Acceptability, Dual protection, Family planning, Female condom, Health care providers, HIV/AIDS and STD prevention, Training.*

INTRODUCTION

The female condom has the potential to increase women's options for preventing both pregnancy and sexually transmitted diseases (STDs) if it is accessible, affordable, and used correctly. Acceptability studies in diverse cultural settings have found the female condom to be acceptable to significant numbers of female users and their male partners,[1,2] but to our knowledge, no published acceptability studies have focused on health care providers. Consequently, little is known about their response to this new prevention technology, including the extent to which they promote it to clients.

Studies of various contraceptive methods suggest that providers' acceptance and endorsement may be a key factor in their clients' uptake and continued use of a method.[3–9] In India, the failure of providers to see the male condom as an effective method for both contraceptive and disease prevention contributed to men's lack of knowledge about correct use.[10] In Tanzania, providers have restricted the access of young clients to oral contraceptives without valid medical justification.[11] The authors of a recent report of a large community-based female condom intervention trial in rural Kenya note that, in spite of the intervention, health care service providers in the community failed to promote female condoms actively and believed them to be unsuitable for most women.[12] Findings from a postmarketing study in Zimbabwe underscore the key role of health care providers in women's access to this new reproductive health technology: More than half of the women using the female condom had heard about the method from a clinic, hospital, or doctor's office.[13]

This article fills the gap in female condom acceptability research by examining family planning (FP) providers' attitudes and experiences regarding the female condom in three diverse settings: South Africa, the US, and Nigeria. These case presentations draw on data from larger, unrelated projects. Although the projects were not designed for the purpose of making cross-country comparisons, all of them sought to study or to change FP providers' attitudes or practices in relation to the female condom. The case study for New York City used data from semistructured interviews with providers in one FP consortium in which no special female condom training had been undertaken. The data from South Africa were drawn from transcripts and observations of a female condom training program and from interviews conducted in preparation for the training. The Nigerian study used observations of client visits before and after providers were trained concerning the female condom. Taken together, the studies give insights into the ways that health care providers may enhance or impede the promotion of the female condom.

CONTEXT OF THE STUDIES

New York City is one of the major epicenters of the human immunodeficiency virus (HIV) epidemic in the US, with over 118,000 cases of acquired immunodeficiency syndrome (AIDS) reported since 1983. Among women, the proportion of AIDS cases attributable to heterosexual contact has increased,[14] from 30% in 1990 to

43% in 1999. The female condom has been available in New York City pharmacies for several years. With a prescription, New York State's Medicaid program covers its cost. South Africa has experienced an explosive growth of HIV infections since 1994. About one in four pregnant women was infected with HIV in the year 2000, with young women at the highest risk.[15] The interest of the government in the female condom goes back to 1995–1996, when it developed a plan to introduce the female condom in public sector health services. The commitment of the government to the female condom is reflected by its purchase since 1996 of over 5 million female condoms (M. Warren, personal communication, April 2001).

In Nigeria, HIV prevalence was officially reported to be 5.4% in 1999 based on sentinel surveys of pregnant women,[16] but this may be an underestimate. Women are at substantial risk for HIV/STDs due to male partners' multiple sexual partnerships within and outside marital unions[17,18] and low rates of condom use.[19] Presently, the female condom is available only to women who attend the clinics in the study described below.

METHODS

All of the projects used qualitative methods, including semistructured interviews, transcripts of provider training, and written field notes. The Nigerian project also used structured observations of providers' interactions with clients during FP visits. The cross-country comparisons were conducted by the first author and were informed by ongoing dialogue with the New York, South African, and Nigerian researchers.

New York City

A pilot interview study of FP providers' attitudes and practices in relation to contraception and disease prevention counseling was conducted in 1998 to prepare for an intervention to promote concurrent HIV/STD and pregnancy prevention (dual protection). The study was conducted at Community HealthCare Network (CHN), which provides FP, prenatal, and primary care services to more than 10,000 clients a year in nine freestanding clinics. CHN has a policy of actively integrating STD/HIV and FP services, and although the female condom is available to interested clients, providers had minimal formal training in this method.

Semistructured interviews were conducted by three of the authors (J. M., S. H., and T. E.) with 22 of the 23 providers (10 nurses, 3 physicians, 4 physician extenders [nurse practitioners and physicians assistants] and 5 social workers) from eight of the clinics. Interviews covered a variety of topics, including risk assessment practices, views about who is a good candidate for various contraceptive methods, and counseling approaches to dual protection. Responses were manually recorded with audiotape backup for reference. A coding scheme for each open-ended response was developed, and the data were coded independently by two members of the research team (J. M. and S. H.), who then met to achieve consensus agreement.

South Africa

To prepare providers in public health clinics for the introduction of the female condom, the Department of Health launched 11 three-day Training of Trainers (TOT) workshops in early 1996 with nearly 300 nurses.[20] Preparatory qualitative individual (n = 30) or group interviews (n = 40 groups) were conducted with ap-

proximately 400 health care providers, policymakers, administrators, and potential users between September and December 1995 to design the TOT curriculum.

The data in this article were derived from (1) transcripts of audiotapes of 9 of the 11 TOT workshops; (2) written field notes from the preparatory interviews with the health care provider subset (approximately 340 of the 400); and (3) Master Trainers' observations of the TOT workshops. These data were collected before the female condom was available in South Africa. The preparatory interviews were conducted by the first author (J. M.) and the project director (E. S.) using an interview guide that focused on prior training, familiarity with the female condom, and services provided. The first author performed content analysis on the interviews and training transcripts to identify salient themes and the range of issues that emerged. No quantitative analyses were conducted; the quotes selected for inclusion are representative of the range of providers' responses in the preparatory interviews and training. The TOT workshop observations were conducted and discussed by the Master Trainers (J. M. and E. S.) throughout the training period.

Nigeria

The female condom was introduced in six FP clinics in Ibadan, Nigeria, as part of a study to increase adoption of HIV/AIDS and pregnancy protection behaviors. Structured observations of FP provider-client interactions were carried out for all visits over a 2-week period at two different time points in the three largest clinics to assess changes in provider behavior. The first set of observations (n = 325) was conducted prior to provider training and the provision of the female condom, while the second set was carried out 15 to 18 months later (n = 289). Twenty different providers were observed each time. The research team, led by the project director (T. J.), was trained in conducting observations and completing a structured checklist to evaluate whether the provider performed a variety of counseling components, including HIV risk assessments, condom negotiation skills, and how to use the male and female condoms. Analyses of changes in provider behavior between the two sets of observations were conducted using chi-square statistics. Data presented in this case presentation also include notes from ongoing monthly service provider meetings, during which providers engage in mutual problem solving around program implementation.

RESULTS

New York City

In New York City, the majority of providers, 57% (12/21), believed that the female condom was good for some women. Typical categories included women with no other options, sex workers, HIV-positive women, women who are self-assertive/want to be in control, and women who are comfortable with their bodies. Only 3 of 21 (14%) thought that all women were good candidates for this method, the same number who believed it was not appropriate for anyone (3 providers had no clear opinion, and 1 was not asked this question). Of providers, 45% (10/22) had ever recommended the female condom, but only 36% (8/22) would recommend it as a primary contraceptive method. This may have been due to concern about increasing the risk of unintended pregnancy: When asked directly if recommending the female condom over hormonal methods could increase this risk, 67% (14/21) agreed. Those who had this concern typically reported that women do not want or

do not know how to use the female condom, or that it is technically difficult to use:

> This might be the case because it's so rarely used. It isn't so popular. Women may not know how to use it so it may sit at home.

> Something could always go wrong there. The man could put his penis to the side or sometimes the condom could get misplaced during the action.

Irrespective of whether they had personally used the female condom, many providers were negative about its aesthetics. Typical responses included

> It's noisy, not convenient, looks strange, too greasy—I don't like the feel.

> For myself, I don't like it—I haven't tried it; part of it is hanging out—it shows on the outside—yuck.

> My own bias is that it's easier for a man to use a [male] condom.

Providers' responses appeared to be colored by their clients' attitudes:

> I guess my bias comes from patients' reactions—99% refused it.

> It's not popular. No one seems interested. We show it, but it seldom gets a "yes."

In spite of these negative responses, 41% (9/22) indicated that they wanted more information about the female condom or questioned the interviewer about method features. One provider linked her lack of knowledge to her reluctance to recommend the method: "It has to do with our own ignorance—we don't promote it as much as we should."

South Africa

Data from the preparatory interviews in South Africa revealed that providers did not conduct sexual risk assessments or talk about sex with clients. Interview notes and training transcripts showed that providers were aware of the benefits of the female condom. A key positive feature mentioned was its disease-protective benefit:

> The female condom actually protects you completely like a bag so when the man enters he does not touch you anywhere. He deposits the fluid in this bag, it does not touch you.

The female condom was also seen as a tool for increasing women's power in the relationship:

> They can take initiative themselves because the males do not like using the male condom, and they have no power over them. So if they are in control they would make use of it.

> If women are empowered, men will bend because the woman will know what they want. If the man does not agree, hard luck for them.

> Because at present they got nothing. With this they can say if you do not want to use a condom, I will use it. It empowers them.

At the same time, providers described a number of method features that might be unacceptable to clients. They noted that some women are unaccustomed to touching their vaginas or using tampons, which might make it difficult for them to insert the female condom. Concern about the lubricant's effect on sexual pleasure was expressed: "Our men are not very keen to have sex with someone who is very wet. . . . Wet women do not stimulate the men." Another common belief was that young women would find the female condom unacceptable:

> Will there be time for these young people to first struggle to get in a Femidom and for the male to put [enter the woman] because the pregnancies that you do get—illegal babies is so many—they do not have the time to put in these things.

> Between the age of 18 and 25, I am sure nobody will use these things because they do not even use *real* [authors' emphasis] condoms.

However, this line of thinking was countered by providers who recognized the variability in women's preferences:

> It seems to me that you always find women who has a like or dislike in something . . . you get adventurous ones that would like to try . . . or are desperate to try something new because they can't find a method that is suitable. Then others will reject it because it is not everyone who likes to work in vaginas.

During the training, providers were asked to try out the female condom themselves. In the session that followed this homework assignment, some reported that they did not like its aesthetics and effect on sexual pleasure, issues that echoed the comments of participants in user acceptability studies.[1,2] The large size of the female condom, visibility of the outer ring outside the vagina, messiness of the lubricant, and noise were reported as physically unappealing. In the words of one provider, "When I inserted it right up, I found there was more of the condom outside; the part that was to cover the labia was too much." With regard to sexual pleasure:

> I was disappointed because we did not really reach each other [achieve orgasm]. He says it feels like masturbation, but I really felt okay during the action, but he was not so happy. We were both frustrated in the end.

> I tried the element of surprise. It was fatal. It is a total passion killer.

However, the value of having service providers practice insertion or use the female condom during sex was clearly evident:

> I think my problem was . . . psychological. I looked at this big thing, and I said this bag must go inside. Maybe I had a negative attitude. Maybe next time I will be more relaxed. Because now we have talked, and I have heard it is working for some people, next time I will try and concentrate.

> Initially . . . I was scared of my vagina, inserting a foreign body. Later on, I managed.

Some providers were keenly aware that they could influence their clients concerning the female condom. Having favorable attitudes about the method and presenting a balanced view of its advantages and shortcomings were seen as critical to effective promotion:

> All I think is the onus is with us, the teachers, to present it with enthusiasm and not to overdo it. State the cons of it. If we present it nicely and positively, it has an impact, but if you say you don't like it, they will definitely not like it, because you prescribe to them that they might not like it.

> As health providers, we have not done such a good thing on marketing the male condom. . . . We want to empower the women, so let's do a good thing of marketing that one.

To increase providers' skills in promoting the female condom to clients, training focused heavily on behavioral exercises, including role plays, story dramas, and letter writing. Following each exercise, providers discussed and analyzed the strategies that were used to encourage client use. For example, in one exercise, providers mobilized the client's social network to demystify the female condom and reduce potential resistance from a partner; in another, the novelty of the female condom was used to market it as a tool for male partner seduction.

Master Trainers' observations of the TOT workshops indicated that providers had a high level of discomfort with discussion of sex. This was evident in an exercise in which providers were asked to name terms for anal sex in the 11 South African languages. They laughed inappropriately and said they did not know any words. Discomfort was also manifest in some providers' body language when they put a male condom on a realistic penile model.

Nigeria

At baseline, observations in Nigeria of client-provider interactions indicated that providers probed clients about their partners' sexual behavior in only 4% of 325 observed visits and counseled clients on how to negotiate condom use with partners in only 3% of visits. Fifteen to 18 months following training, these percentages increased to 22% and 29%, respectively. At follow-up, providers discussed the female condom in 89% of visits and showed clients how to use it in 80% of visits (as the female condom was first introduced as part of the project, there was no female condom measure at baseline). Providers were more likely to discuss the female condom with new clients than with continuing clients and were more than two times as likely to demonstrate female than male condom use (80% vs. 29% of visits, respectively). All differences were statistically significant at $P \leq .05$.

Several important issues were raised by providers during the monthly service provider meetings. They noted that the female condom was a concrete tool to counter their frustration in promoting the male condom. In counseling clients, they reported presenting the female condom as a method that addressed many of the barriers associated with the male condom. They also reported that, despite some initial discomfort, they were quickly able to master candid sexual discussions with clients.

DISCUSSION

These case studies provide valuable insight into the acceptability of the female condom to family planning providers. Despite the lack of a uniform methodology

across the three locations, these data highlight the importance of addressing health care providers' attitudes and practices in introducing the female condom. The South African case study illuminates providers' beliefs and attitudes in a setting prior to the availability of the female condom, while the New York City study characterizes provider perspectives in a setting in which the female condom had been available for several years, but not actively promoted. The Nigerian case study provides snapshots of provider practices before and after the female condom was introduced into FP clinics. Several cross-cutting themes are discussed below.

Unfamiliarity With and Lack of Knowledge About the Female Condom

A common thread in two of the case studies was providers' unfamiliarity and lack of experience with the female condom. In New York City, although the method was not new, providers had minimal training. Their opinions were frequently negative, sometimes in response to client feedback. During the interviews, some providers reflected on their lack of knowledge and indicated they would like to know more. In South Africa, personal practice with the female condom generated more positive attitudes about the method that hopefully would be carried into client counseling.

Discomfort with Sexuality and Talking About Sex with Clients

In South Africa, the most striking observation of Master Trainers during the TOT workshop was providers' discomfort with sexuality and with candid discussion of sex. This also was noted by Becker[21] in her work on the integration of HIV/STD prevention and FP in Jamaica, Brazil, and Honduras. Unease in talking about sex could impede successful female condom introduction, which requires providers to teach clients how to negotiate with sexual partners and to query them about sexual partners and practices. Although the Nigerian providers had little experience in exploring clients' sexual risk behaviors, they responded favorably to the training in this area.

Bias Against the Female Condom

In South Africa, providers who had practiced insertion of the female condom as part of the TOT experience expressed concern about its physical appearance and its effects on sexual pleasure. These negative attitudes may be transferred to their professional counseling role, an issue that warrants empirical investigation. They also felt that it would be inappropriate for young people. In New York, providers viewed the female condom as a method of last resort, to be used by women without other options or by those at high risk for STDs, but not as a useful option for all women. Numerous negative attitudes were cited even by providers who viewed it as appropriate for some women. They appeared to have been influenced by clients' negative feedback and did not know how to counteract this. They also did not have confidence in the contraceptive efficacy of the female condom if it were used as a single method. These findings are consistent with early reports about provider attitudes in a community intervention trial in Kenya.[12]

In contrast, the Nigerian providers felt positive about the female condom after training. This was evident in visit observations—which showed that they promoted the female condom in four fifths of visits—and in the discussions at monthly service provider meetings, at which providers shared strategies to help clients increase sexual protection. These providers' frustration with counseling around male condom

use appeared to be one of the driving forces motivating their adoption of new counseling approaches.

Health Care Providers as Agents of Change

Providers in South Africa were cognizant of the influence they could exert on clients with regard to the female condom. They suggested promotional strategies that would address potential client resistance. In Nigeria, the providers focused on promoting the positive aspects of the female condom—especially its advantages over the male condom—to stimulate the interest of the clients in the method. They also honed their skills in teaching women how to introduce and negotiate female condom use with their partners.

Recommendations

Data from these case studies presenting different views on the acceptability of the female condom among FP providers in three countries led us to suggest the following:

1. *Training.* FP providers have been trained in fertility control methods and were initially unprepared for dealing with diseases and women's sexual health—which are highlighted in the HIV/AIDS epidemic. Nevertheless, with adequate provider training, motivation, and preparation, FP clinics are a logical site for the introduction and promotion of the female condom for dual protection—both disease and pregnancy prevention.[22]

Training content needs to go beyond providing information about the technical aspects of the method. Providers who internalize negative perceptions of the female condom may unwittingly transmit these feelings to clients. At the same time, providers may internalize their clients' attitudes about the method. Providers need to know how to motivate clients to protect themselves, feel confident in trying a new method, talk to partners about the female condom, and develop strategies for reaching their male partners. Sexual desensitization should be a key component of training as it can decrease providers' unease in asking clients about their sexual partners and practices. Greater provider comfort with the method may increase clients' initial uptake and continued use of the female condom.

Preservice training curricula in nursing, medicine, public health, and social work schools should address new contraceptive technologies. Training programs should have a field work component that facilitates the transfer of female condom knowledge and skills from the "classroom" to the clinical setting.

2. *Ongoing monitoring of provider behavior.* Service protocols to integrate the female condom into contraceptive counseling need to be developed to ensure that it is not offered selectively. The female condom should be viewed as an integral part of the contraceptive method mix, to be used either by itself or in conjunction with another method. However, protocols themselves are insufficient to change provider behavior. They must be accompanied by continuous training, feedback, and problem solving to monitor what the providers are doing and the impact of their behavior on client outcomes.

3. *Research on health care providers and the female condom.* To increase understanding of the acceptability of the female condom, systematic research using a combination of quantitative and qualitative methods is needed to test the impact of both provider- and peer-delivered counseling interventions. Studies should focus on the processes by which health care providers' beliefs and attitudes affect the introduction of the female condom in clinic and community settings. Assessment of

female condom training programs and their effects on provider practices also warrants attention. Such research can determine how to improve provider training and ongoing supervision.

CONCLUSION

Designing interventions that address sources of provider resistance and enhance providers' skills in female condom promotion and counseling strategies may help to increase clients' use of female condoms. Mobilizing providers as an ally in female condom advocacy can help to ensure a smoother transition of the female condom from research to entry in the marketplace. We need to build on previous family planning program research and view providers as a key ingredient in contraceptive method acceptability, uptake, and continued use. This powerful influence should be profitably channeled to increase the ability of women and their sexual partners to protect themselves from unintended pregnancy and the devastating impact of HIV/STDs.

ACKNOWLEDGEMENT

Support for this work was provided by the World AIDS Foundation/Fogarty International Center, Horizons, the AmBase Foundation, the National Institute of Child Health and Human Development (R01-HD37343, Theresa M. Exner, PhD, Principal Investigator). We are especially grateful for the support provided by the HIV/AIDS and STD Directorate, South African Ministry of Health, Pretoria, South Africa; Community HealthCare Network, New York, New York; and the Association for Reproductive and Family Health, Ibadan, Nigeria, and we appreciate the participation of our health care colleagues within these organizations in the training, program implementation, and research activities. We also acknowledge the contributions of the two anonymous reviewers whose comments helped improve the quality of the manuscript.

REFERENCES

1. World Health Organization. *The Female Condom: a Review*. Publication number WHO/HRP/WOM/97.1. Geneva, Switzerland: World Health Organization; 1997.
2. Cecil H, Perry MJ, Seal DW, Pinkerton SD. The female condom: what we have learned thus far. *AIDS Behav*. 1998;2:241–256.
3. Abdool Karim Q, Preston-Whyte E, Abdool Karim SS. Accessibility of condoms to teenagers at family planning clinics in Durban: part II: a provider's perspective. *S Afr Med J*. 1992;82:360–362.
4. Simmons R, Hall P, Díaz J, Díaz M, Fajans P, Satia J. The strategic approach to contraceptive introduction. *Stud Fam Plann*. 1997;28:79–94.
5. Kim YM, Maranguanda C, Kols A. Quality of counseling of young clients in Zimbabwe. *E Afr Med J*. 1997;74:4–5.
6. Harrison PF, Rosenfield A., eds. *Contraceptive Research, Introduction, and Use. Lessons from Norplant. Institute of Medicine Subcommittee for Workshop in Implant Contraceptives: an Illuminating Case Study in Current Dilemmas and Possibilities*. Washington, DC: National Academy Press; 1998.
7. Mfono Z. Teenage contraceptive needs in urban South Africa: a case study. *Int Fam Plann Perspect*. 1998;24:180–183.
8. World Health Organization. Reproductive health research: the new directions. Biennial

Report 1996-1997. In: Khanna J, Van Look PFA, eds. Geneva, Switzerland: World Health Organization; 1998.
9. Brown JW, Boulton ML. Provider attitudes toward dispensing emergency contraception in Michigan's title X programs. *Fam Plann Perspect*. 1999;31(1):39–43.
10. Sharma V, Sharma A. Condom promotion strategies: what we need to know? [letter]. *AIDS*. 1995;9:537–538.
11. Speizer IS, Hotchkiss DR, Magani RJ, Hubbard B, Nelson K. Do service providers in Tanzania unnecessarily restrict clients' access to contraceptive methods? *Int Fam Plann Perspect*. 2000;26:13–20, 42.
12. Feldblum P, Kuyoh MA, Bwayo JJ, et al. Female condom introduction and sexually transmitted infection prevalence: results of a community intervention trial in Kenya. *AIDS*. 2001;15:1037–1044.
13. Kerrigan D, Mobley S, Rutenberg N, Fisher A, Weiss E. *The Female Condom: Dynamics of Use in Urban Zimbabwe*. New York, NY: The Population Council Horizons; October 2000.
14. New York City Department of Health, Office of AIDS Surveillance. *AIDS Surveillance Update in NYC First Quarter*. New York, NY: New York City Department of Health; 2000.
15. South Africa Department of Health, HSR and Epidemiology Directorate. National HIV survey of women attending antenatal clinics of the public services in South Africa, 2001.
16. Joint United Nations Programme on HIV/AIDS. *AIDS Epidemic Update: December 2000*. Geneva, Switzerland: Joint United Nations Programme on HIV/AIDS. December 2000.
17. Orubulaye IO, Caldwell JC, Caldwell P. Perceived male sexual needs and male sexual behavior in Southwest Nigeria. In: Caldwell JC, Caldwell P, Orubuloye IO, et al., eds. *Toward the Containment of the AIDS Epidemic: Social and Behavioural Research*. Canberra, Australia: Health Transition Centre; 2000:1–19.
18. Messersmith LJ, Kane TT, Odebiyi AI, Adewuyi AA. Who's at risk: men's STD experience and condom use in Southwest Nigeria. *Stud Fam Plann*. 2000;31(3):203–216.
19. Nigeria Population Commission. *Nigeria Demographic and Health Survey 1999*. Calverton, MD: National Population Commission and ORC/Macro; 2000.
20. Mantell JE, Scheepers E, Abdool Karim QA. Introducing the female condom through the public health sector: experiences from South Africa. *AIDS Care*. 2000;12:589–601.
21. Becker J, Leitman E, Fathalla MF. Introducing sexuality within family planning: the experience of three HIV/STD prevention projects from Latin America and the Caribbean. *Quality/Calidad/Qualite*. No. 8. New York, NY: Population Council; 1997.
22. Stein Z. Editorial: Family planning, sexually transmitted diseases, and the prevention of AIDS—divided we fail? *Am J Public Health*. 1996;86(6):783–784.