

This list was compiled by female condom experts at Family Health International, with support from the Office of Sustainable Development, Africa Bureau, U.S. Agency for International Development. August 2001. **Copies of these articles are not available from FHI.** Links to National Library of Medicine and POPLINE abstracts are included for some records.

## List of References and Abstracts for Articles on the Female Condom

1. Anonymous. Female condom launched in Zimbabwe. AIDS Wkly Plus 1997 July 28;9-10.  
<http://popline.org/>  
Abstract: The female condom is a disposable, lubricated, polyurethane sheath designed to be inserted into the vagina before and while having sexual intercourse to afford protection against unwanted pregnancy and the transmission of sexually transmitted diseases. Population Services International (PSI), on behalf of the National AIDS Coordination Program and the Zimbabwe National Family Planning Council, has launched the condom in Zimbabwe under the brand name Care. The arrival of the female condom has been welcomed by both the country's health authorities and women's groups. Data from the National AIDS Coordination Program indicate that more than 1 million of Zimbabwe's 12.4 million people are infected with HIV. The Ministry of Health and Child Welfare reports that 500 people die each week of AIDS-related illnesses. 8 of 10 HIV-infected women contracted the virus through unprotected sexual intercourse. Women, who generally must rely upon their partners' willingness to use condoms, are up to four times more vulnerable to HIV infection through sexual intercourse than are men. Encouraging research conducted in Zimbabwe in early 1997 determined that 56% of men and 50% of women interviewed were interested in using the female condom. They will initially be available only in pharmacies in Harare, Bulawayo, and Chitungwiza at the introductory price of approximately US\$0.27 per box of two. The government has also secured funding to procure approximately 400,000 female condoms for free distribution through public health institutions. Courtesy of Population Information Program.
2. Anonymous. U.N. promotes female condom against AIDS in Africa. AIDS Wkly Plus 1998 May 4;16  
<http://popline.org/>  
Abstract: 15 African countries held talks in Pretoria, South Africa, during April 20-22, 1998, on increasing the use of the female condom in Africa to help reduce the incidence of HIV transmission. The conference came in the wake of a UN Program on AIDS (UNAIDS)-supported study of prostitutes in Thailand in 1997 which found that the average incidence of sexually transmitted diseases fell by 34% and the number of unprotected sex acts fell by 25% when female condoms were made available. More than 4 million female condoms were sold in the developing world in 1998, and worldwide, more than 18 million have been sold since they first came on the market in 1992. UNAIDS' special public sector pricing agreement has been successful in the 16 targeted developing countries.

South Africa, Uganda, Zambia, and Zimbabwe had substantial female condom sales in 1998. Courtesy of Population Information Program.

3. Agha S. Consumer intentions to use the female condom after one year of mass-marketing (Lusaka, Zambia). Washington DC: Population Services International [PSI], Research Division. 1999; 16 p.

<http://popline.org/>

Abstract: This study examines the intentions of using female condoms among men and women in Lusaka, Zambia. A social marketing program distributed female condoms, which were sold in more than 300 retail outlets in Lusaka. Through a subsidy, the female condoms were sold at a price comparable to that of the subsidized male condom. Data were collected by exit survey from a representative sample of consumers at outlets that sell/distribute the female condom. Findings indicate that about 40% of sexually experienced respondents intend to use female condom, but 72% of the respondents intend to use the male condom. Among the respondents, the young respondents are more interested in using the female condom than older respondents use, while unmarried respondents with regular partners are more likely to use it. Both male and female reported similar intentions to use the female condom. The relationship between intentions to use the female condom and sociodemographic variables are similar to the relationship between sociodemographic variables and intentions to use the male condom. Therefore, these findings imply more intensive counseling/education about female condom, particularly about insertion, in order to eliminate the barriers to its adoption in Lusaka, Zambia. Courtesy of Population Information Program.

4. Ankrah EM and Attika SA. Arlington, Virginia: Family Health International FHI, AIDS Control and Prevention Project [AIDSCAP], Women's Initiative. 1997; 47 p.

<http://popline.org/>

Abstract: Use of the female condom as either the primary contraceptive method or as a substitute if a partner refuses to use the male condom would significantly enhance women's power to protect themselves from unwanted pregnancy and sexually transmitted diseases, including HIV. As part of a campaign to make the female condom more accessible, Family Health International's AIDS Control and Prevention Project (AIDSCAP) conducted exploratory research in Nairobi, Kenya, and Sao Paulo, Brazil, in 1996. 103 Brazilian and 132 Kenyan women kept coital logs and participated in focus group and peer support discussions. Women in both countries praised the female condom for its protection from fear of pregnancy and disease, lack of interference with sexual pleasure, comfort relative to the male condom, and opportunity for couples to "stay together longer" after ejaculation. They perceived that partner negotiations had to proceed without insinuations of infidelity or guilt. They adopted strategies aimed at information provision and attitudinal change rather than confrontation and female dominance. The peer support groups were an effective channel for preparing women to introduce the female condom into sexual relationships. These groups provided participants with a safe, unstructured space to share experiences with dealing with resistant male partners, offer encouragement and support to each other, explore

- feelings, and articulate fears. Focus group discussions involving 24 Brazilian and 46 Kenyan male partners also revealed general support for the female condom and a desire to promote it among their peers. Programs for introducing female condoms should integrate ongoing peer support groups to empower women to approach their sexual partners about use of this method and ensure sustained use. Courtesy of Population Information Program.
5. Anonymous. Peer support groups boost use of female condom. *Contracept Tech Update* 1997;18(9):109-10.  
<http://popline.org/>  
Abstract: Preliminary research findings from Brazil and Kenya indicate that, when women are provided with female condoms and peer group support, traditional obstacles to safe sex practices can be overcome. In these countries, as well as many others, women face cultural barriers to negotiating condom use with male partners. The study, conducted by the Women's Health Initiative of Family Health International's AIDS Control and Prevention Project, involved 106 Kenyan and 103 Brazilian women. A female focus group was held at the beginning of the study, followed by two peer support group meetings, with another focus group at the end of the study. Group support was an essential element in the acceptance process. Women who were afraid or unsuccessful with initial use were encouraged by other group members to try different, non-threatening approaches to the negotiation of female condom use and given suggestions for overcoming difficulties with insertion and lubrication. Some of these strategies included laying the female condom on the bed so the male partner raises the subject of its use and telling the partner the doctor had recommended the method to avoid the negative side effects associated with the pill. When female condom use is presented as a form of pregnancy prevention, the association of condoms with infidelity is overcome. Courtesy of Population Information Program.
  6. Anonymous. UNAIDS promotes female condoms in developing countries. *AIDS Wkly Plus* 1997 July 28;10-1.  
<http://popline.org/>  
Abstract: The female condom is a thin, lubricated, 6.8 inch long polyurethane sheath with plastic rings at both the closed and open ends. It is designed to be inserted into the vagina before and while having sexual intercourse to afford protection against unwanted pregnancy and the transmission of sexually transmitted diseases. Female Health Co. of Chicago, Illinois, is the US manufacturer of the female condom. The United Nations program against AIDS announced July 15, 1997, having made a deal with Female Health Co. to sell the condom in developing countries for approximately one dollar, less than half the normal market price. About 10 developing countries, including South Africa, Brazil, and Thailand, have already placed orders for the condom and about 30 more are interested. The anticipated availability of the female condom in these developing countries means that for the first time women in such male-dominated societies will be able to protect themselves against pregnancy and HIV even if their partners refuse to wear condoms. A woman can even insert the female condom into her vagina hours before having sex. Courtesy of Population Information Program.

7. Artz L, Macaluso M, Brill I, Kelaghan J, Austin H, Fleenor M, Robey L, and Hook EW 3d. Effectiveness of an intervention promoting the female condom to patients at sexually transmitted disease clinics. *Am J Public Health* 2000;90(2):237-44.  
<http://popline.org/>  
Abstract: This study evaluated a behavioral intervention designed to promote female condoms and reduce unprotected sex among women at high risk for acquiring sexually transmitted diseases (STDs). Participants in the study included 1159 female STD patients aged 18-35 years from STD clinics in Birmingham and Huntsville, Alabama. The study found that 79% of the participants with follow-up data used the female condom at least once and often multiple times. More than one-third of those who completed the study used female condoms throughout follow-up. Use of barrier protection increased significantly after intervention, and high use was maintained during a 6-month follow-up. To account for attrition, the use of protection by all subjects was projected under 3 conservative assumptions. The initial visit and termination visit projections suggest that use increased sharply after the intervention and declined during follow-up but remained elevated compared with the baseline. This study demonstrated that with positive promotion and with proper training on female condom use, many clients of public STD clinics will try, and some will continue, to use this method of protection. Courtesy of Population Information Program.
8. Berer M. Dual protection: making sex safer for women. In: *Beyond acceptability: users' perspectives on contraception*. London, England: WHO, *Reprod Health Matters*. 1997; p.109-121  
<http://popline.org/>  
Abstract: The failure to take into account both contraceptive needs and needs in relation to HIV and other sexually transmitted diseases (dual protection) has seriously impeded the ability of public health programs to promote reproductive health. Consistent use of a male or female condom remains, at present, the only means of dual protection. Despite the clear advantages of a method under women's control, female condoms are even less promoted or available than male condoms. The limited data on acceptability, use, and effectiveness of dual protection methods imply that intensive, costly, large-scale public health investment is required to achieve significant reductions in unwanted pregnancies and infections. Campaigns in all world regions have shown that men and women at risk are willing to use condoms and other means of dual protection when client counseling, health worker training, and support for negotiations with partners are available. As long as public health programs continue to target only commercial sex workers, they will fail to be woman-centered, not succeed at reducing the risk of HIV among all women, and serve to keep contraceptive protection unintegrated with other aspects of reproductive health. Courtesy of Population Information Program.
9. Blogg S and Blogg J. Acceptability of the female condom (Femidom) within a population of commercial sex workers and couples in Salima and Nkhotakota, Malawi. Research Triangle Park, NC; FHI: 1994; 37 p.

10. Bogart LM CHPSD. Hispanic adults' beliefs, attitudes, and intentions regarding the female condom. *J Behav Med* 2000;23(2):181-206.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=10833679&dopt=Abstract](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=10833679&dopt=Abstract)
11. Bounds W. Female condoms. *Eur J Contracept Reprod Health Care* 1997;2(2):113-6.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=9678099&dopt=Abstract](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=9678099&dopt=Abstract)
12. Carlin E and Boag F. The polyurethane female condom: increasing the choice for women. *Venereology* 1996;9(1):35-9.  
<http://popline.org/>  
Abstract: The polyurethane female condom is manufactured exclusively in London by Chartex International and marketed under the names Reality, Femidom, and Femy. The device consists of a disposable, odorless polyurethane sheath 17 cm long. There is a loose inner ring at the closed end of minimum diameter 5.0 cm, and a softer, fixed ring at the open, outer end of minimum diameter 6.5 cm. Each condom is prelubricated with dimethicone, a non-spermicidal lubricant. The female condom was designed to be used for one act of sexual intercourse, then discarded. Designed to protect women from both unwanted pregnancy and infection with sexually transmitted disease, the female condom is promoted as a barrier contraceptive which women can use with neither the consent nor cooperation of men. The authors present a review of published data on the condom's in vitro viral impermeability, in vivo efficacy in preventing reinfection with *Trichomonas vaginalis*, rupture rates compared to male condoms, and the increased sensitivity compared to male condoms reported by some men. The following undesirable events were reported to occur by some couples using the female condom: the outer ring of the device was pushed into the condom, entry of the penis outside of the device, complete extrusion of the device, discomfort, rubbing of the penis by the inner ring, and device rustling or coldness. The limited related data on contraceptive efficacy suggest that the female condom is comparable to other forms of barrier contraception, but less effective than hormonal contraception or IUD use. Approximately 25% of couples recruited to female condom studies expressed their desire to continue using the method. However, before using a female condom, all women should have the method demonstrated and discussed, with attention given to its contraceptive efficacy and potential user problems. Courtesy of Population Information Program.
13. Chipungu J. Zambian women shun female condoms. *Global Health Council's Global AIDS Prog Newsl* 1999 Oct-Nov;(58):14-5.  
<http://popline.org/>  
Abstract: This article reports issues related to the use of female condoms among women in Zambia. The Female Condom Review estimated that by the year 2000, more than 13 million women would be infected with HIV and about 4 million would die from AIDS. The high prevalence of HIV infection among Zambian women was associated with unprotected sex. In order to lessen or eradicate this trend, the Society for Family Health launched female condoms in the rural and urban areas of Zambia. Despite its massive campaign, the use of female condoms

- still remains minimal. Some gender activists attribute the limited use of female condoms to male dominance in women's sexual activities. Women verbalized that they find it difficult to convince their husbands to use the condom. In addition, the findings of a demographic health survey also revealed that only few Zambian women use modern contraceptive methods as others considered it alien in the African cultural context. Instead, 50% of the women use the pill as a method of contraception and only about 25% use female condoms. Women who used female condoms reported several disadvantages: 1) difficulties encountered in insertion; 2) it makes noises during intercourse; and 3) it is expensive compared to male condoms. Courtesy of Population Information Program.
14. Choi KH, Roberts KJ, Gomez C, Grinstead O. Facilitators and barriers to use of the female condom: qualitative interviews with women of diverse ethnicity. *Women Health* 1999;30(1):53-70.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=10813267&dopt=Abstract](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=10813267&dopt=Abstract)
  15. Deniaud F. [Current status of the female condom in Africa]. *Sante* 1997;7(6):405-15.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=9503499&dopt=Abstract](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=9503499&dopt=Abstract)
  16. Deniaud F. [Dynamics of female condom acceptability among prostitutes and young women in Abidjan, Ivory Coast]. *Contracept Fertil Sex* 1997;25(12):921-32.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=9497605&dopt=Abstract](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=9497605&dopt=Abstract)
  17. Deniaud F, Fampou-Toundji JC. Acceptability of the female condom amongst commercial sex workers in Thailand and Cote d'Ivoire. *Int J STD AIDS* 1999;10(12):828-30.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=10639068&dopt=Abstract](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=10639068&dopt=Abstract)
  18. Drew WL, Blair M, Miner RC, and Conant M. Evaluation of the virus permeability of a new condom for women. *Sex Transm Dis* 1990;17(2):110-2.  
<http://popline.org/>  
Abstract: In San Francisco, California, researchers used an artificial intercourse model to test a polyurethane woman's condom (WPC-33 under development by the Wisconsin Pharmaceutical Company) for permeability to HIV and cytomegalovirus (CMV). The disposable device is loose-fitting and has flexible rings at both ends. The researchers placed a virus suspension inside a condom and then placed inside it a second condom containing tissue culture medium to test for permeability. A 35-ml plastic syringe case served as an artificial penis. It was inserted into the inner condom, which was inside an artificial foam vagina, and then plunged 50 times to simulate trauma associated with sexual intercourse. Aliquots of the fluids in the outer and inner condoms were grown in culture. CMV was grown in human embryonic lung fibroblasts for four weeks. Virus-positive cultures were identified by their cytopathogenic effect. HIV was grown for eight days in normal human lymphocytes and assayed with an antigen capture enzyme-linked immunosorbent assay (ELISA). In three trials using CMV, all

- inner condom fluids were positive; all outer condom fluids were negative. The detection limit of the assay was 0.2 mcl of inoculum. The same results were found in three trials with HIV. The detection limit of the ELISA for HIV was 0.67 mcl of inoculum. Thus, a female condom may present an alternative means of controlling sexually transmitted diseases and conception. Previous studies have suggested that the female condom may leak less than a male condom. However, this device has not yet proven effective in vivo and it was not tested for efficacy as a contraceptive. Additional studies will be required to prove the utility of this barrier in vivo. Courtesy of Population Information Program.
19. El-Bassel N, Krishnan SP, Schilling RF, Witte S, Gilbert L. Acceptability of the female condom among STD clinic patients. *AIDS Educ Prev* 1998;10(5):465-80. [http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=9799941&dopt=Abstract941](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=9799941&dopt=Abstract941)
  20. El-Bassel N, Krishnan SP, Witte S, Schilling RF, Catan V, Pollin S. Correlates of intention to use the female condom among women taking methadone. *Womens Health Issues* 1998;8(2):112-22. [http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=9542466&dopt=Abstract66](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=9542466&dopt=Abstract66)
  21. Elias C J and Coggins C. Female-controlled methods to prevent sexual transmission of HIV . *AIDS* 1996;10(Suppl 3):S43-S51
  22. Farr G, Gabelnick H, Sturgen K, and Dorflinger L. Contraceptive efficacy and acceptability of the female condom. *Am J Public Health* 1994;84(12):1960-4. <http://popline.org/>  
 Abstract: A clinical trial of the Reality female condom was undertaken in 1990 to test for contraceptive efficacy and to provide information on the product to the US Food and Drug Administration. 377 eligible women aged 18-40 years old participated at one of six sites in the US or three in Latin America. The women were in a stable, monogamous, heterosexual relationship and agreed to use only the female condom for 6 months. Analysis of contraceptive efficacy was based on the 328 women who used the female condom at least once. Data were pooled for the US sites and for the Latin American sites. More US women had previous experience with barrier methods, more were using barrier methods in the 3 months before enrolling in the study, and more were nulliparous. Of the 221 US women, 33.5% discontinued, whereas, 55.1% of the 107 Latin American women discontinued. The main reasons for discontinuation were accidental pregnancy or personal reasons. The 6-month cumulative pregnancy rates were 12.4 and 22.2 for the US and Latin American groups, respectively. 12 of the 39 pregnancies were classified as method failures, 24 as user failures, and three as indeterminate. The 6-month gross cumulative life-table perfect-use pregnancy rate was 2.6 for the US group and 9.5 for the Latin American group. Pap smears showed no negative changes from use of the condom. More than 80% of the subjects liked using the female condom, but some women reported objections on the part of their male partners. Courtesy of Population Information Program.
  23. Feldblum PJ, Bwayo JJ, Kuyoh M, Welsh M, Ryan KA, Chen-Mok M. The female condom and STDs: design of a community intervention trial. *Ann Epidemiol* 2000;10(6):339-46.

- [http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=10963999&dopt=Abstract](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=10963999&dopt=Abstract)
24. Feldblum PJ, Chen-Mok M, Bwayo JJ, Omari M, Kuyoh M, Ryan KA. Intracluster correlation of STD prevalence in a community intervention trial in Kenya. *Lancet* 1999 Oct 16;354(9187):1356-7.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=10533869&dopt=Abstract](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=10533869&dopt=Abstract)
25. Finger WR and Keller S. Introduction strategies raise key questions. *Network* 1995;16(1):4-8.  
<http://www.fhi.org/en/fp/fppubs/Network/v16-1/nt1611.html>  
Abstract: Key issues that must be considered before a new contraceptive is introduced center on the need for a trained provider to begin or terminate the method, its side effects, duration of use, method's ability to meet users' needs and preferences, and extra training or staff requirements. Logistics and economic issues to consider are identifying a dependable way of effectively supplying commodities, planning extra services needed for the method, and cost of providing the method. Each contraceptive method presents a different side effect pattern and burdens the service delivery setting differently. The strategy developed to introduce or expand the 3-month injectable Depo-Provera (DMPA) can be used for any method. It includes a needs assessment and addresses regulatory issues, service delivery policies and procedures, information and training, evaluation, and other concerns. Viet Nam's needs assessment showed that Norplant should not be introduced until the service delivery system becomes stronger. Any needs assessment for expansion of contraceptive services should cover sexually transmitted disease/HIV issues. A World Health Organization strategy helps officials identify the best method mix for local situations. Introductory strategies must aim to improve the quality of family planning programs and expand choices. Many begin by examining existing data and conducting interviews with policymakers, users, providers, and women's health advocates. Introductory programs for Norplant focus on provider training, adequate counseling and informed consent for users, and ready access to removal. They need a well-prepared service delivery infrastructure. The first phase of the DMPA introductory strategy for the Philippines comprised a social marketing campaign and DMPA introduction at public clinics in 10 pilot areas with strong service delivery. Successful AIDS prevention programs show that people tend to use barrier methods when they are available. USAID is currently studying whether or not women in developing countries will use the female condom. Courtesy of Population Information Program.
26. Fontanet AL, Saba J, Chandelying V, Sakondhvat C, Bhiraleus P, Rugpao S, Chongsomchai C, Kiriwat O, Tovanabuttra S, Dally L, et al. Protection against sexually transmitted diseases by granting sex workers in Thailand the choice of using the male or female condom: results from a randomized controlled trial. *AIDS* 1998;12(14):1851-9.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=9792386&dopt=Abstract](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=9792386&dopt=Abstract)

27. Gardner R, Blackburn R, and Upadhyay U. Closing the condom gap. *Popul Rep. Series H: Barrier Methods* 1999;(9):1-36.

<http://popline.org/>

Abstract: Consistent condom use by nonmonogamous sex partners could protect millions of people from HIV infection and other sexually transmitted diseases (STDs) and reduce the enormous costs associated with STDs. Condom use needs to increase to about 15 billion/year (from 8-10 billion/year) to prevent STDs. An estimated 33 million people live with HIV/AIDS worldwide, and an estimated 16,000 people are infected with the virus each day. In 12 out of 15 countries surveyed, more than 75% of never-married men have changed their sex behavior in response to HIV/AIDS. While condom use remains low within marriages (approximately 7%), some married couples use condoms in combination with another contraceptive. Recent surveys of sexually active, unmarried people have found rates of condom use of 2-17% among African women, 7-50% among African men, <1-36% among Latin American women, and 27-64% among Latin American men. Many unmarried, sexually active people continue to practice risky sex behavior--even when they know about STDs and condoms--because of mistaken beliefs that they are not at risk and/or because social norms discourage condom use and encourage high-risk male sex behavior. Traditional gender roles and fear of violent reactions inhibit women from talking about sex with their partners or negotiating condom use. Promotion, advocacy, communication campaigns, and counseling can change social norms and inform people about risks. Governments must help close the condom gap by adopting policies that make condoms widely available and universally accepted. Donors must also provide adequate funds and technical assistance to meet this challenge. Courtesy of Population Information Program.

28. Gibson S, McFarland W, Wohlfeiler D, Scheer K, Katz MH. Experiences of 100 men who have sex with men using the Reality condom for anal sex. *AIDS Educ Prev* 1999;11(1):65-71.

[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=10070590&dopt=Abstract](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=10070590&dopt=Abstract)

29. Gil VE. The new female condom: attitudes and opinions of low-income Puerto Rican women at risk for HIV / AIDS. *Qual Health Res* 1995;5(2):178-203.

<http://popline.org/>

Abstract: Since the early 1990s, Puerto Rico has had the highest HIV infection rate of all US states and territories. The author interviewed 144 low-income female Hispanic residents of median age 32 years in Santurce, metropolitan San Juan, to learn whether they might be interested in using the Reality female condom. Perceived feasibility of the product for personal use, women's capacity to introduce the device to partners in conversation, perceived ability by women to negotiate its use, perceptions of product efficacy, and attributions accorded the device through demonstration and physical manipulation were investigated. 64.6% of the women were either somewhat willing or willing to try Reality. The female condom was therefore regarded as a promising method of female protection among the Hispanic women studied. Substantive support and education

- should, however, be made available concurrently to these women and their male partners. Courtesy of Population Information Program.
30. Gilbert LK. The female condom (FC) in the U.S.: lessons learned. [Advertisement insert]. *Am J Public Health* 1999;89(6):28 p  
<http://popline.org/>  
Abstract: This monograph presents a literature review on the efficacy and acceptability of the female condom (FC), particularly in the US. It provides a ready reference for counselors, trainers, health care providers, educators, governments, donors, and other interested individuals. The FC is a polyurethane sheath with rings on each end, one to insert into the vagina and the other to provide coverage of the external genitalia. Prior to the approval of FC release to the market in 1993, there has been no effective, safe, reversible, female-controlled contraceptive method that prevents both unwanted pregnancies and sexually transmitted diseases (STDs). A technical description of FC particularly its physical characteristics and instruction use is included in this document. Contraceptive efficacy studies in the US revealed that a greater number of women prefer the use of FC compared with other female barrier options. This method also increases the bargaining power of women in the choice of a contraceptive method. In conclusion, the five important findings in this review include the efficacy of the FC to prevent pregnancies and STDs, its high acceptability, its promising use by high-risk populations, additional efforts in information dissemination, and the need for additional research. Courtesy of Population Information Program.
  31. Gollub E, Stein Z, and El-Sadr W. Power and the female condom. The authors reply [letter]. *Fam Plann Perspect* 1996;28(2):78-9.  
<http://popline.org/>  
Abstract: In response to a letter-to-the-editor critique of the author's original article, the author notes that in most studies of the female condom, the majority of women and half of their partners have liked the method. The use of the female condom may indeed be more difficult with casual partners and among inexperienced young people, but the new method is comparable to the male condom in effectiveness. Both men and women report increased physical sensation, and women gain confidence and a sense of control using the method. There is every reason for optimism that the female condom will be accepted by young people, and the method should be introduced in counseling sessions with adolescents. Courtesy of Population Information Program.
  32. Gollub EL. The female condom: tool for women's empowerment. *Am J Public Health* 2000;90(9):1377-81.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=10983187&dopt=Abstract](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=10983187&dopt=Abstract)
  33. Gollub EL, French P, Loundou A, Latka M, Rogers C, Stein Z. A randomized trial of hierarchical counseling in a short, clinic-based intervention to reduce the risk of sexually transmitted diseases in women. *AIDS* 2000;14(9):1249-55.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=10894290&dopt=Abstract](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=10894290&dopt=Abstract)
  34. Gollub EL, Stein Z, el-Sadr W. Short-term acceptability of the female condom among staff and patients at a New York City Hospital. *Fam Plann Perspect*

1995;27(4):155-8.

[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=7589356&dopt=Abstract](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=7589356&dopt=Abstract)

35. Gollub EL. The female condom: STD protection in the hands of women [editorial]. *Am J Gynecol Health* 1993;7(4):91-2.

<http://popline.org/>

Abstract: In 1993, the US Food and Drug Administration (FDA) approved the female condom Reality. It provides better protection against sexually transmitted diseases (STDs) than does the male condom. The polyurethane sheath is more resistant to tears and covers the vagina, cervix, and vulva. Since it does not depend on erection of the penis, the female condom protects women from STDs/HIV that can be transmitted through the pre-ejaculate. In light of the AIDS epidemic, FDA approved the female condom based on its contraceptive effectiveness rather than on its ability to protect against STDs. Annual contraceptive failure rates for Reality range 5-21%, which match those of other barrier methods for women and men. Incorrect or inconsistent use affects its contraceptive effectiveness. The female condom prevents passage of virus particles as small as the hepatitis B virus which is smaller than HIV. In a study, all women who correctly and consistently used Reality were protected from *Trichomonas vaginalis*, while sporadic users were not protected. Currently, less than 20% of US couples use male condoms, indicating a need for women to have options to protect their reproductive and genital health. The female condom provides women such an option since women are in total control of its use. Women with partners who do not want to use a male condom maintain that Reality will revolutionize sexual dynamics. Its visibility does not help women with violent partners, however. Educational efforts about all methods that can be used without men's knowledge need to reach these women. Family planning providers need to shed the old concept of women as incompetent users and set up counseling programs that promote women's methods. They should accept and provide the female condom. Basic sexual education and constant provider support and encouragement are crucial. Courtesy of Population Information Program.

36. Gollub EL. Women need HIV prevention approaches that maximize choice. *Sex Health Exch* 1999;(1):12-4.

<http://popline.org/>

Abstract: The Philadelphia Women's Health Sister Studies examined protective options against HIV and sexually transmitted diseases with women. A total of 292 women participating in the study were subdivided into a male condom arm, a female condom arm, and a hierarchy arm. Findings showed that the percentage of women retained in the study was poorest for the single message arm; about 51% for the female condom arm, 58% for the male condom arm, and 75% for the hierarchy arm. Moreover, most women were satisfied using the female condom. Well-liked aspects were high level of protection, natural feel, and female control; dislikes were related to insertion, appearance, and the inner ring. This study has important implications for women's prevention interventions. Courtesy of Population Information Program.

37. Gross M, Buchbinder S P, Holte S, Celum C L, Koblin B A, and Douglas JM Jr. Use of Reality "female condoms" for anal sex by US men who have sex with men. *Am J Public Health* 1999;89(11):1739-41.

<http://popline.org/>

Abstract: This observational sample assesses the use of Reality female condoms for anal sex by HIV-seronegative men who have sex with men. A total of 2277 men from Boston, Chicago, Denver, New York, San Francisco, and Seattle completed the self-administered questionnaires. Results showed that of the 1084 men who had heard of using the female condom for anal sex, 145 (13%) reported using it in the prior 6 months, 95 used it for receptive sex, 94 used it for insertive sex, and 44 used it for both. 49% of the receptive users cited problems, which included pain, discomfort, and difficulty in inserting and keeping the device in place. For the insertive users, 37% complained of lack of pleasure and difficulty in inserting and keeping it in place during sex. 2 receptive and 2 insertive users reported bleeding by the receptive partner. In view of these complaints, there is a need to redesign female condoms so as to increase acceptability and use by men. This is important for the prevention of HIV transmission. Courtesy of Population Information Program.

38. Haignere CS, Gold R, Maskovsky J, Ambrosini J, Rogers CL, Gollub E. High-risk adolescents and female condoms: knowledge, attitudes, and use patterns. *J Adolesc Health* 2000;26(6):392-8.

[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=10822180&dopt=Abstract](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=10822180&dopt=Abstract)

39. Hamzaoui R and Boukhris M. Contraception in the future. [*La contraception du futur.*]. *Tunis Med* 1994;72(2):87-9.

<http://popline.org/>

Abstract: In the last decade, global use of contraceptive methods has increased. About 50% of couples of childbearing age use a modern contraceptive method. This evolution and a positive change in attitude towards male contraception has encouraged research in fertility regulation to enlarge and to improve acceptance of the contraceptive mix. Current injectable contraceptives interfere with the menstrual cycle. Research is exploring ways to minimize such secondary effects by reducing the total hormone dose and by changing the way the active product is delivered (e.g., microspheres). An injectable prototype is an analogue of levonorgestrel (HRP 002). A new IUD is made of leather suspended by a nylon suture which has been inserted into the uterine muscle. RU-486, often used to interrupt early pregnancy, is being tested as an oral contraceptive (OC). It inhibits secretion of gonadotropins and ovulation. It holds promise as an OC with no estrogen component. Since it also inhibits endometrial development and thus prevents implantation, it may someday be used for emergency contraception (i.e., postcoital contraception). New contraceptive implants under study include Norplant RII (2 rods of levonorgestrel lasting for 3 years), Implanon (desogestrel), and Capranor (biodegradable implant lasting 2 years). The female condom consists of a flexible polyurethane sheath with a flexible ring at each end. It has the potential to protect against sexually transmitted diseases since it covers the labial lips and is impermeable to HIV. France and Switzerland have both

approved its use. It will enter the UK market at the end of the year. Approval for marketing has been sought in the US. Courtesy of Population Information Program.

40. Harrison L, Bachman T, Freeman C, and Inciadi JA. The acceptability of the female condom among US women at high risk from HIV. *Cult Health Sexuality* 2001;3(1):101-18.
41. Hart G J, Pool R, Green G, Harrison S, Nyanzi S, and Whitworth J A. Women's attitudes to condoms and female-controlled means of protection against HIV and STDs in South-Western Uganda . *AIDS Care* 1999;11(6):687-98.
42. Herman R. Where the female condom is no joke. A UN program has sold millions to African nations seeking to stem the tide of AIDS. *Wash Post Health* 1998 Jun 16:9.

<http://popline.org/>

Abstract: The female condom received criticisms and ridicule in the US when it debuted in 1994. However, in the developing world the UN AIDS Program has recently turned to the female condom with utmost seriousness because it not only prevents pregnancy but can also prevent transmission of HIV and other sexually transmitted diseases. Under a new UNAIDS initiative to promote the female condom, the cost has been lowered and African nations this year have bought millions of devices in the hope of slowing the spread of the AIDS virus that has devastated their population. Public officials find that when the female condom is offered as an option along with the male condom, more people act to protect themselves. Moreover, in promoting the female condom internationally, the Female Health Company and international family planning organizations have found differences in cultural attitudes toward sexuality and male-female relations. In Bolivia, for instance, women alone are the target and the goal is "empowerment", showing women that they have options and choices within the context of their sexual relations with men. Courtesy of Population Information Program.

43. Herndon N. Research on HIV prevention methods controlled by women. [La recherche de methodes de prevention du VIH controlees par les femmes.]. *AIDS Captions*. Version Française. 1996:18-21.

<http://popline.org/>

Abstract: Although the message that consistent condom use may prevent AIDS has been widely disseminated, it is of little value for women whose economic dependence on men and subordinate social status limits their power to negotiate on sexual matters. The rapid spread of AIDS among women, who are biologically more susceptible to sexually transmitted diseases (STDs) than men, adds urgency to the search for a female-controlled means of AIDS prevention. Women need protection against other sexually transmitted diseases because they facilitate the spread of AIDS. Currently, the only preventive strategy controlled by women is use of local contraceptives, which offer only partial protection. Female condoms are not easily available except in Europe and the U.S., they are relatively expensive, and they require some male cooperation. Female condoms are made of polyurethane, a more robust material than the latex of male condoms. Laboratory studies indicate that the female condom is impermeable to causative agents of

STDs including HIV. The only existing study of human use showed good protection against trichomonas. Studies of acceptability have shown that the most frequent complaints concern the internal ring and the movement of the condom during use. Other studies are underway, including research on whether the condom can be cleaned and reused. In vitro studies have shown nonoxynol 9 to be effective against many agents of STDs, including HIV. But effectiveness depends on complete coverage and other elements. Frequent use may sometimes irritate the cells of the vagina and cervix, increasing risk of HIV infection. More study is needed on nonoxynol 9 and on benzalkonium and menfegol, spermicides widely used in some countries. New vaginal products under development could eliminate the shortcomings of available spermicides. Ideally they would protect women against a range of infectious agents, and could be applied in gel, film, or suppository form. Courtesy of Population Information Program.

44. Hicks D. Barrier methods of contraception. *Genitourin Med* 1995;71(3):202

<http://popline.org/>

Abstract: Although a recent Cavalieri d'Oro et al. article correctly concludes that while barrier methods reduce the risk of gonorrhoea and HIV, they may be less consistent for other diseases, the review does not include the female condom, the newest method of barrier contraception. Laboratory tests have shown polyurethane, the material of which the new condom is manufactured, to be impermeable to HIV and cytomegalovirus. Similar permeability studies using bacteriophages smaller than hepatitis and HIV show the membrane to be a complete barrier. As such, one may expect polyurethane to be the raw material from which male condoms will be made in the future. One clinical study assessed the prevention of reinfection with *Trichomonas vaginalis* among 104 women who had sexual intercourse with infected male partners. No woman who used the female condom during every act of sexual intercourse became infected. 14% of nonusers and 14% of inconsistent users were, however, reinfected. A study by Soper et al. found use of the female condom to not be associated with genital trauma. Leeper and Conrardy subjected the female condom and the male condom to the standard ASTM water leak test to find a 0.6% incidence of leakage from pinholes and tears for the female condom compared to 3.5% with the male condom. The risk of semen leakage during actual use as identified by acid phosphatase was 2.7% with the female condom and 8.1% with the male condom. Perfect users of the female condom may expect a 2.6% probability of failure over six months' use. Perfect use, however, reduces the annual risk of acquiring HIV by more than 90% among women who have sexual intercourse twice weekly with an infected male. Courtesy of Population Information Program.

45. Hicks D. The female condom: the African perspective. *Afr Health* 1998;20(3):18-9.

<http://popline.org/>

Abstract: The female condom is a soft, pliable, prelubricated polyurethane pouch which is inserted into the vagina prior to having sexual intercourse. A flexible polyurethane ring encircles the condom's open end to prevent the entire pouch from entering the vagina during intercourse and to cover the vulva while allowing an entryway for the penis. A smaller flexible ring inside of the condom helps to

position and hold the condom within the vagina. Studies have found the female condom to be as effective as male condoms or other female controlled barrier methods in preventing pregnancy. Moreover, the female condom is theoretically better than the male latex condom because of its lower leakage and slippage rates. A recent study in Thailand has shown that accessibility of the female condom can lead to a reduction in STIs among prostitutes, while Trussel et al. estimate that perfect use of the device may reduce the annual risk of acquiring HIV by more than 90% among women who have sexual intercourse twice weekly with an infected male. Women participants in several studies in Africa, however, have complained that the female condom is too long, and over-lubrication has been a reported problem in areas where dry sex is preferred. On the other hand, some users have found sexual intercourse using the female condom to convey the same level of physical sensitivity in the genital region as intercourse without using a barrier method. Evidence suggests that the female condom may be acceptable to men and women in certain types of sexual relationships, but unacceptable in others. Courtesy of Population Information Program.

46. Irwin K, Scarlett M, and Moseley R. The urgent need for new HIV / STD prevention options for women. *Observations from the CDC. J Womens Health* 1998;7(9):1081-6.

<http://popline.org/>

Abstract: This article outlines the urgent need for additional HIV/AIDS prevention methods for women. The development of female condom, a polyurethane vaginal pouch that provides physical barriers to sperm and sexually transmitted pathogens, manifests its efficacy of reducing the risk of sexually transmitted disease (STD) transmission. On the other hand, vaginal microbicides such as N-9 spermicides reduce the risk of acquiring cervical gonorrhea and chlamydia infection by about 30%, although studies of prolonged N-9 spermicidal use reported an increased susceptibility to genital tract infections, epithelial disruption and genital ulcers. Although the federal government has funded microbicide research and product development activities, it still prioritizes HIV vaccine development and behavioral risk reduction programs. In the face of financial, scientific, and ethical constraints, public health officials, researchers, industry, donor organizations and women health advocates call for partnerships between the private and public sectors to foster product development. Despite the slow progress of microbicide development, the government would continuously promote the use of female/male condoms for HIV/STD prevention, while the Center for Disease Control and other federal health agencies would continue to pursue its commitment of making HIV/STD prevention option for women a reality. Courtesy of Population Information Program.

47. James B and Wejr P. The female condom. In: *Women and HIV / AIDS: an international resource book. Information, action and resources on women and HIV / AIDS, reproductive health and sexual relationships*, written and edited by Marge Berer with Sunanda Ray. London, England, Pandora Press, 1993. p 166-8.

<http://popline.org/>

Abstract: The female condom is a 17 cm long, loose-fitting polyurethane sheath about three times the diameter of a male condom, with a flexible ring at either

end. The ring inside the closed end of the sheath facilitates insertion of the condom into the vagina and helps to keep the sheath in place. It is inserted the same way as a diaphragm, but the ring does not have to be around the cervix. The ring on the open end remains outside of the vagina. The female condom, Femidom, was found in clinical trials to be about as effective in preventing pregnancy as the male condom. If it reaches the market widely, it will be the only available female-controlled method to provide as much protection as male condoms against sexually transmitted diseases (STD) and HIV. By mid-1992, the female condom had been approved by Switzerland, the US and the UK. More information about the female condom's disadvantages has emerged from a clinical trial of Femidom in Britain. 34 of 106 self-selected couple-participants reported that the entire device was accidentally pushed into the woman's vagina on at least one occasion. This was often not noticed until after ejaculation. 26 of the women said that the man's penis needs to be guided carefully into the condom to avoid accidentally bypassing it on penetration, but women who used the device for more than one year experienced fewer insertion problems over time. Further, 23 found that the condom either slipped out of the vagina or was drawn out with the penis during repeated penetration; it was also reported to make a variety of unappealing noises during intercourse. 57 women reported adverse side effects such as soreness caused by the outer ring and discomfort for both the man and woman from the inner ring. For women at high risk for HIV and other STDs, however, it may well be worth the time it takes to learn to use the female condom well. That Femidom costs about three times as much as the male condom is another drawback. On the positive side, polyurethane is less likely to cause allergic reactions, is rarely ruptured, warms quickly to body temperature, and may offer increased sensitivity compared to the male condom. Loss of erection does not affect the efficiency of the condom and there is no reason to withdraw immediately after ejaculation. Moreover, the female condom does not have to be fitted by a health professional. The British report suggests that the acceptability of the female condom may be increased if it were produced in more than one size, if the rings and lubrication were improved, and if the noises could be reduced. Courtesy of Population Information Program.

48. Joanis C, Latka M, Glover LH, Hamel S. Structural integrity of the female condom after a single use, washing, and disinfection. *Contraception* 2000;62(2):63-72.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=11102589&dopt=Abstract](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=11102589&dopt=Abstract)
49. Joint United Nations Programme on HIV / AIDS [UNAIDS] and Population Services International [PSI]. *Social marketing. Expanding access to essential products and services to prevent HIV / AIDS and to limit the impact of the epidemic.* Geneva, Switzerland, UNAIDS, 1999. 12 p.  
<http://popline.org/>  
Abstract: This document by the Joint UN Programme on HIV/AIDS (UNAIDS) highlights the 3 key lessons learned during social marketing activities. The leading social marketing program, Population Services International, has coordinated with UNAIDS to develop, implement and promote social marketing

as a key strategy in the prevention of HIV/AIDS. A project implemented in Myanmar in response to the need to increase availability and accessibility of condoms have proven that financial support from UNAIDS was essential for the continuous implementation of the program. The launch of female condoms as an alternative form of contraception in Zimbabwe demonstrates that social marketing, with the use of commercial techniques and support from the government could successfully introduce new products and services to the public. The success of programs for behavioral change towards HIV/AIDS conducted in South Africa and Nigeria has been attributed to the effective creation of a supportive environment. Social marketing could influence large numbers of individuals by enlisting the help of prominent individuals and groups for the promotion of safer sex messages. Courtesy of Population Information Program.

50. Joint United Nations Programme on HIV / AIDS [UNAIDS], World Health Organization [WHO]. Special Programme of Research, Development and Research Training in Human Reproduction, and World Health Organization [WHO]. Reproductive Health Technical Support / Family Planning and Population. The female condom: Why is it important? Geneva, Switzerland, WHO, 1997 Apr. 2 p.

<http://popline.org/>

Abstract: Between 1990 and 1995, the proportion of HIV infections in women increased from 25% to 45%. While sexually transmitted diseases (STDs) affect both men and women, they more often more seriously affect women. The female condom is a strong, soft, transparent sheath which lines the vagina to create a barrier against sperm and sexually transmitted microorganisms. It is the only method other than the male condom which provides protection against both STD/HIV and unplanned pregnancy. The female condom has no side effects and does not need to be provided by health care personnel. The 1994 International Conference on Population and Development and the Fourth World Conference on Women called for more attention to providing women with the means of preventing the transmission of STDs, including HIV, as well as unintended pregnancy. Proper use of the female condom can achieve these objectives. The World Health Organization and UNAIDS are helping countries introduce the female condom. This document is intended to help advocate and promote the method. Courtesy of Population Information Program.

51. Joint United Nations Programme on HIV / AIDS [UNAIDS], World Health Organization [WHO]. Special Programme of Research, Development and Research Training in Human Reproduction, and World Health Organization [WHO]. Reproductive Health Technical Support / Family Planning and Population. The female condom: how can it be made available? Geneva, Switzerland, WHO, 1997 Apr. 2 p.

<http://popline.org/>

Abstract: The female condom is the only method of protection against both pregnancy and sexually transmitted disease (STD) infection which women can use on their own. Offering such dual protection, the female condom needs to be made available as part of both family planning and STD services. Program managers need to consider issues of advocacy, availability, access, training, and

- information in their attempts to ensure the appropriate provision of the female condom. From the earliest phase of female condom introduction, information must be provided to decision makers, program managers, service providers, community leaders, and women's and youth groups. Those groups should be involved in planning the introduction of the method. People need to be aware of what the product is and where it is available. Efforts must then be made to ensure that the female condom will be available and accessible on a long-term basis. People who will provide the female condom need to be trained in its use, efficacy, and how to help women negotiate its use with their partners. Both men and women need to know about the effectiveness, safety, and correct use and disposal of the female condom. Courtesy of Population Information Program.
52. Joint United Nations Programme on HIV / AIDS [UNAIDS], World Health Organization [WHO]. Special Programme of Research, Development and Research Training in Human Reproduction, and World Health Organization [WHO]. Reproductive Health Technical Support / Family Planning and Population. The female condom: questions and answers. Geneva, Switzerland, WHO, 1997 Apr. 4 p.  
<http://popline.org/>  
Abstract: The female condom is a thin, strong, soft, transparent polyurethane sheath which lines the vagina to create a barrier against sperm and sexually transmitted microorganisms. A ring at the closed end is used for insertion and helps to maintain the device at the upper end of the vagina. A larger and thinner outer ring remains outside of the vagina when the condom is inserted, anchoring the condom so that the sheath covers the external genitalia and the base of the penis during intercourse. The female condom can be used by women of all ages, is prelubricated with a nonspermicidal silicone fluid, intended for single use, nonbiodegradable, and inserted manually into the vagina at any time before intercourse and removed afterwards. It is the only method other than the male condom which provides protection against both STD/HIV and unplanned pregnancy. Laboratory studies have shown the female condom blocks the passage of STDs, including HIV, and use-effectiveness studies have found an accidental pregnancy rate of 15-25% over a 1-year period of method use. The female condom has no side effects for most people and does not need to be provided by health care personnel. Courtesy of Population Information Program.
53. Kalichman SC, Williams E, Nachimson D. Brief behavioural skills building intervention for female controlled methods of STD-HIV prevention: outcomes of a randomized clinical field trial. *Int J STD AIDS* 1999;10(3):174-81.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=10340198&dopt=Abstrac](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=10340198&dopt=Abstrac)
54. Kerrigan D, Mobley S, Rutenberg N, Fisher A, and Weiss E. The female condom - dynamics of use in Urban Zimbabwe. New York; Population Council:2000. 49 p.
55. Klein H, Eber M, Crosby H, Welka DA, Hoffman JA. The acceptability of the female condom among substance-using women in Washington, DC. *Women Health* 1999;29(3):97-114.

[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=10466513&dopt=Abstract](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=10466513&dopt=Abstract)

56. Lamptey P, Schwarzwald A, Ankrah EM, Ramsey M, and Finger WR. The female condom: from research to the marketplace. Arlington, Virginia, Family Health International [FHI], AIDS Control and Prevention [AIDSCAP] Project, Women's Initiative, 1997 Aug. 44 p.  
<http://popline.org/>  
Abstract: This document reports on a 1997 conference hosted by AIDSCAP on current issues related to the female condom, especially its accessibility. The 130 attendees, representing 60 organizations in 19 countries, approved more than 40 recommended actions to be taken by various sectors interested in increasing the accessibility of the female condom. The objectives of the conference were to share lessons learned since a 1993 conference and to develop strategies to increase awareness, acceptability, availability, and affordability of the female condom. The first section of this report summarizes the most important findings of working groups that explored issues related to: science, women's empowerment, product delivery, product introduction, price, policy, or evaluation. Section 2 covers the major issues discussed by experts during presentations and debates that took place on the second day when participants could attend four of six brief sessions before joining one of three directional workshops covering research, policy, and intervention. The third section presents the recommendations arising from the conference that targeted policy-makers, donors and the private sector, women's advocates, program planners, scientists active in research and development, researchers in the field, and community organizations. The final section identifies the most important overall steps needed to promote and expand accessibility of the female condom. Courtesy of Population Information Program.
57. Latka M, Gollub E, French P, Stein Z. Male-condom and female-condom use among women after counseling in a risk-reduction hierarchy for STD prevention. *Sex Transm Dis* 2000;27(8):431-7.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=10987447&dopt=Abstract](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=10987447&dopt=Abstract)
58. Macaluso M, Demand M, Artz L, Fleenor M, Robey L, Kelaghan J, Cabral R, Hook EW. Female condom use among women at high risk of sexually transmitted disease. *Fam Plann Perspect* 2000;32(3):138-44.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=10894260&dopt=Abstract](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=10894260&dopt=Abstract)
59. Macaluso M, Demand MJ, Artz LM, Hook EW 3rd. Partner type and condom use. *AIDS* 2000;14(5):537-46.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=10780716&dopt=Abstract](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=10780716&dopt=Abstract)
60. Madrigal J, Schifter J, Feldblum PJ. Female condom acceptability among sex workers in Costa Rica. *AIDS Educ Prev* 1998;10(2):105-13.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=9573433&dopt=Abstract](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=9573433&dopt=Abstract)
61. Makulowich GS. HIV and STD prevention update: alternatives to the male condom. *AIDS Patient Care STDs* 1998;12(6):499-501.

<http://popline.org/>

Abstract: In 1993, the US Food and Drug Administration approved Reality, a female condom, as a contraceptive and a means to prevent transmission of disease. Reality is a lubricated polyurethane sheath that can be inserted as many as 8 hours before intercourse and is secured with an internal and an external ring. In the US, the product is marketed over the counter for approximately \$9 for a box of 3, and it is targeted to women aged 18-30. While the outer package claims that Reality can help prevent pregnancy and disease transmission, the package insert notes that it was only tested in vivo during development for its contraceptive effectiveness. A UN study, however, found a one-third reduction in mean incidence of sexually transmitted diseases among sex workers in Thailand who were given both male and female condoms versus the incidence among those who only had access to male condoms. Sales of the product grew 207% in 1 year, and 76% of first-time users indicated that they would use Reality again. However, the package insert reports that the annual pregnancy rate with Reality may be as high as 25% and is 12% with perfect use. If the condom fails to prevent pregnancy, it will also fail to prevent disease. Therefore, women are advised to continue to rely on the male condom, and calls have been made for further testing of the female condom. Currently, UN member states can purchase the female condom at greatly discounted prices for AIDS programs, and large-scale shipments have been sent to Ghana, Indonesia, Papua New Guinea, Costa Rica, Zimbabwe, Uganda, and the Ivory Coast. Courtesy of Population Information Program.

62. Mantell JE, Scheepers E, Karim QA. Introducing the female condom through the public health sector: experiences from South Africa. *AIDS Care* 2000;12(5):589-601.

[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=11218545&dopt=Abstract](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=11218545&dopt=Abstract)

63. Marseille E, Kahn JG, Billingshurst K, Saba J. Cost-effectiveness of the female condom in preventing HIV and STDs in commercial sex workers in rural South Africa. *Soc Sci Med* 2001;52(1):135-48.

[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=11144911&dopt=Abstract](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=11144911&dopt=Abstract)

64. Masters L, Mostyn P, Bunting P, and Welch J. How do attenders of a Genitourin Med clinic feel about the female condom? *Br J Fam Plann* 1996;21(4):135-8.

<http://popline.org/>

Abstract: In 1993 in England, clinical staff of the Genitourin Med (GUM) department at King's College Hospital in South London asked at least 79 female patients to use the female condom for two months so researchers could evaluate acceptability of the female condom. The leading reason for not participating was being content with current contraceptive method. 83% of women who used the male condom at least sometimes did so to protect against sexually transmitted diseases (STDs). 95% of the women willing to participate in the study had heard of the female condom. At follow-up, 49 had used at least 3 female condoms, 11 had used less than 3, 2 did not use any female condoms at all (due to lack of partner cooperation), and 19 were lost to follow-up. 12 women used all 12

- condoms given to them. Among the 49 cases, 51% of both partners read the instruction leaflet. Only the woman read it in 43% of cases. In one case, only the man read it. 26% of couples experienced the problem of the penis entering the vagina outside the female condom, which could be overcome by adjusting lubrication levels. 43% of the women considered the amount of lubricant on the female condom to be appropriate. 31% thought that there was too much lubricant. 26.5% thought that there was too little lubricant. 33% of the women and 10% of the men found sexual pleasure experienced with the female condom to be as great or greater than that experienced with no barrier at all. 69% of the women and 45% of the men considered the female condom as an acceptable potential contraceptive method. 84% of the women and 65% of the men considered it as an acceptable barrier against STDs. 22% and 61% of women would use it, respectively, regularly and occasionally. 80% of women would recommend it to their friends. In conclusion, the female condom was more accepted at the GUM clinic than with other groups previously studied. Courtesy of Population Information Program.
65. McCabe E, Golub S, Lee AC. Making the female condom a "reality" for adolescents. *J Pediatr Adolesc Gynecol* 1997;10(3):115-23.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=9288655&dopt=Abstract](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=9288655&dopt=Abstract)
66. McGill W, Miller K, Bolan G, Malotte K, Zenilman J, Iatesta M, Kamb M, Douglas J. Awareness of and experience with the female condom among patients attending STD clinics. *Sex Transm Dis* 1998;25(4):222-3.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=9564729&dopt=Abstract](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=9564729&dopt=Abstract)
67. Meekers D. Patterns of use of the female condom in urban Zimbabwe. Washington, D.C., Population Services International [PSI], Research Division, 1999. [3], 21 p. PSI Research Division Working Paper No. 28  
<http://popline.org/>  
Abstract: Data obtained from exit surveys with a random sample of 1753 consumers at retail outlets in Zimbabwe were used to examine patterns of awareness and use of the female condom, and to evaluate variations in the use of the female condoms by type of partner. Findings suggest that awareness of the female condom is very high (80%). Female condoms are most appealing to consumers who have a regular nonmarital partner. One out of four consumers have discussed using the female condom with their regular partner. Consumers are much less likely to have discussed using it with their spouse (15%), or with their casual partners (9%). User-prevalence of the female condom has remained low at 2.3% of all consumers. Use is higher with regular partners (3.0%) than with spouses (1.4%) or casual partners (1.0%). Use of the female condom does not increase with the number of sexual partners or with HIV risk perception, unlike the case for the male condom. Comparison of the characteristics of users of male and female shows that users of female condoms are more likely to be female, to have a slightly higher socioeconomic status and education, to be monogamous, and to have a lower HIV risk perception. In conclusion, female condoms are not used for protection in high-risk but rather for protection in relatively low-risk acts. Courtesy of Population Information Program.

68. Monekosso HT. The female condom: what about its safety, effectiveness and acceptability? *AIDS Anal Afr* 1997;7(3):9-11.

<http://popline.org/>

Abstract: The female condom is a polyurethane sheath of 0.42-0.53 mm thickness, measuring 17 cm in length and 7.8 cm at its widest diameter, which is inserted into the vagina before having sexual intercourse. It forms a strong, soft, transparent sheath which lines the vagina to create a barrier against sperm and sexually transmitted infections. A small ring at the closed end is used for insertion and to help maintain the device at the upper end of the vagina, while a larger and thinner outer ring remains outside of the vagina when the condom is inserted. The sheath is designed to cover the external genitalia and the base of the penis during intercourse. The condom is prelubricated with dimethicone lubricant, an inert, nonsporicidal silicone-based fluid. It is a single-use, single-packet, nonbiodegradable, disposable device which appears to offer an HIV/AIDS prevention option to the male condom. However, little is known about the female condom and it is not yet widely available. UNAIDS is devising programs to introduce female condoms and make them widely distributed in developing countries. The need for the female condom, advantages of the device, its cost and availability, and women's views are discussed. Courtesy of Population Information Program.

69. Moore LJ. "It's like you use pots and pans to cook. It's the tool": the technologies of safer sex. *Sci, Tech Human Values* 1997;22(4):434-71.

<http://popline.org/>

Abstract: This article analyzes the results of 27 semistructured interviews conducted with 19 self-identified prostitutes living in the San Francisco Bay area of the US to determine their use of the technologies of safer sex. After an introduction, the article briefly describes the fluid boundaries of the social worlds that engage in knowledge production about safer sex and about prostitutes and considers the relative stability of the flexible and portable sex devices as well as the genesis of innovation. Next, the technological and institutional history of the following devices is presented with a focus on production and regulation: the condom, the female condom, latex gloves, and dental dams/plastic wrap. The article continues with a look at how sex workers reconfigure their sex behavior and that of new users who adopt the innovative use of devices. It is concluded that an understanding of the social processes involved with these multilayered innovations and configurations of these devices and their users contributes to our understanding of how different social groups develop, reject, or negotiate use of devices based on criteria such as cost, ease of use, available scientific evidence, contribution to pleasure, and control. Courtesy of Population Information Program.

70. Mumia JA. The female condom: what role in changing the rapist's attitude? *Medicus*. 1999 Feb:10-2.

<http://popline.org/>

Abstract: This article reports the case of a 38-year-old woman who suffered vaginal small gut prolapse resulting from traumatic coitus and discusses the potential of female condoms in protecting women at risk. Colporrhexis, the term

for a complete or almost complete rupture of the vaginal vault with little or no associated injury to the cervix and the lower uterine segment, may be caused by other predisposing factors like posterior colporrhaphy, pelvic abscess drainage, Douglas Pouch puncture, posterior colpotomy, culdoscopy and traumatic speculum examination. Since traumatic coitus is one cause of vaginal small gut prolapse, the use of female condom was proposed to prevent such injury. Advantages of using female condoms include: 1) protection without significant cooperation of a male partner; 2) nonconstricting and does not greatly reduce male sensitivity; 3) can be inserted up to two hours in advance of intercourse; 4) offers greater protection against sexually transmitted diseases (STDs); and 5) its oil-based lubricants do not make it less effective in protecting against STDs. In contrast, disadvantages of female condoms include: 1) it is not visually appealing; 2) discomfort is felt from the inner ring during intercourse; 3) it sometimes squeaks during use; and 4) it would not stay in place in some positions. Courtesy of Population Information Program.

71. Musaba E, Morrison CS, Sunkutu MR, and Wong EL. Long-term use of the female condom among couples at high risk of human immunodeficiency virus infection in Zambia. *Sex Transm Dis* 1998;25(5):260-4.

<http://popline.org/>

Abstract: A study conducted in Lusaka, Zambia, sought to determine whether couples at high risk of HIV infection would use the female condom over a 1-year period and if such use would lead to a reduction in unprotected coital acts. A total of 99 couples in which at least one partner had a sexually transmitted disease were enrolled. At baseline, 73% of men were HIV-positive and 8% had gonorrhea, while 47% of the women were HIV-positive and 10% had gonorrhea. The couples were given female condoms, male condoms, and spermicides and counseled to use either condom and spermicide for each coital act. 51, 38, and 30 couples were available for follow up at 3, 6, and 12 months, respectively. A total of 3426 coital acts were recorded during the study period. 45%, 46%, and 57% of coital acts were protected by the male condom at 3, 6, and 12 months, respectively. Female condoms were used in 24%, 27%, and 23% of coital acts and by 86%, 79%, and 67% of the returning couples during each time interval. Less than 15% of sex acts during any time period were unprotected by a barrier method. Male condom use was higher when only the female was HIV-infected, while female condom and spermicide use were higher when the male was infected. Higher levels of use of the female condom at 12 months were correlated with high self-efficacy and low perceived barriers to method use. Although male condoms were used more often than the female condom, these findings suggest that the addition of female condoms to the barrier method mix may reduce unprotected sex among couples at high risk of HIV infection. Courtesy of Population Information Program.

72. Mutenukile EL and Simonde S. The acceptability study of the female condom in Zambia. Lusaka, Zambia, University of Zambia, School of Medicine, 1995 Aug. [4], 19, [14] p.

<http://popline.org/>

Abstract: A study conducted in Lusaka, Zambia, in a 4-month period in 1995 examined the acceptability of the Femidom female condom among three groups

of sexually active women: 20 family planning clients at University Teaching Hospital, 20 clients at a sexually transmitted disease (STD) clinic, and 20 commercial sex workers. 85% of family planning and 75% of STD clients indicated they volunteered for the study because of curiosity about the female condom; in contrast, 75% of sex workers enrolled for the protection the condom offers against STDs. Only 20% of family planning clients, 25% of STD clients, and 35% of sex workers had taken an HIV test, primarily because of fear of a positive result. 65% of family planning clients and 56% of STD clients, compared with only 20% of sex workers, expressed initial concern that the device was too big for the vagina. The percentages of women who liked Femidom were 20%, 31%, and 70%, respectively. Among male partners, these percentages were 15%, 25%, and 45%. Although study participants were issued five female condoms, an average of only two were used. Women's reasons for disliking the device included its large size, irritation, discomfort caused by the hard inner ring, interference with sexual foreplay, reductions in sexual pleasure, and failure of the device to stay in place during coitus. Male partners cited psychological issues with the thought of entering a plastic tube, difficulties with penetration, interference with foreplay, and the appearance of the device. These findings indicate a need for improvements in the design of Femidom in terms of its size, thickness, and the hardness of the inner ring. Courtesy of Population Information Program.

73. Mwakisha J. Female condom study explores role of peer support in sustaining use. *Women's forum. AIDS Captions* 1996;3(2):46-8.

<http://popline.org/>

Abstract: The AIDS Control and Prevention (AIDSCAP) Project's Women's Initiative, together with the US Agency for International Development, supported a study of the use of female condoms. 96 women in 10 focus groups in Nairobi and Sao Paulo participated in a discussion group about their experiences with the female condom designed to determine how the female condom affects women's ability to negotiate safer sex and to identify reasons for continued use and nonuse of the device. The study design allowed participants to help each other devise strategies for negotiating the use of the female condom with their partners and to sustain that use through peer support. Most of the women reported that use of the condom gave them the courage to discuss sex with their husbands and boyfriends. They remained, however, wary about occasionally denying their partners sexual intercourse. The study's design, women's Networks, and men's perspective on the female condom are discussed. 55 men in six focus groups reported preferring the female condom over the tight and uncomfortable male condom, and planned to use them if made available. Courtesy of Population Information Program.

74. Naidoo C. Female condom joins SA's fight against AIDS. *Sunday Times*. 1999 Feb 14;:[5] p.

<http://popline.org/>

Abstract: Available data indicate that women are the fastest growing HIV-positive population group in the world. It is expected that by the end of 2000, women will comprise the majority of people who are newly infected with HIV. More than 17% of South Africa's population is infected with HIV, and in KwaZulu-Natal, the worst affected province, almost one third of pregnant women are infected.

However, results from a UN Joint Program on AIDS (UNAIDS) study in 1997 found that when the female condom was made available, the incidence of STD infection fell by 34% and the number of unprotected sex acts by 25%. UNAIDS' studies also indicate that the female condom is highly cost-effective. South Africa has placed an order for 1.5 million female condoms for use in helping to prevent the transmission of HIV/AIDS and other STDs, as well as unwanted pregnancies. The order is part of Female Health's multi-year contract with UNAIDS. Courtesy of Population Information Program.

75. Nkhama G and Fetters T. Female condom acceptability in Zambia. *Sex Health Exch* 1999;(1):14-5.

<http://popline.org/>

Abstract: This article discusses a female condom that offers Zambian women another option to control their own fertility and sexual health. A cross-sectional study was conducted in three public sector clinics in Lusaka City. The findings revealed interest, even excitement, in the female condom. Most of the women and men welcomed the female condom as a method of choice in Lusaka. Moreover, attitudes toward the female condom are sometimes based on gender beliefs. The strongest reason for discontinuation was the unwillingness of the male partner.

Thus, its introduction should be accompanied by an education campaign to combat social stigma associated with male and female condoms. Courtesy of Population Information Program.

76. Nokes KM, Brown J. Teaching about the female condom. *Holist Nurs Pract* 1997;11(2):1-8.

<http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&listuids=9035616&dopt=Abstract>

77. O'Campo P, Fogarty L, Gielen AC, Armstrong K, Bond L, Galavotti C, and Green BM. Distribution along a stages-of-behavioral-change continuum for condom and contraceptive use among women accessed in different settings. *J Community Health* 1999;24(1):61-72.

<http://popline.org/>

Abstract: This paper examines the readiness to use condoms and contraception among women in the US. Data were collected from 3784 women in 4 cities recruited in 3 different types of settings: 1) community; 2) facilities not targeted to HIV-positive women; and 3) medical facilities for HIV positive populations. Readiness to use condoms or contraception was measured using the Transtheoretical Model of Change. Women reported being in different stages along the continuum of condom and contraceptive use in the three settings. A greater proportion of women in the HIV-facility (45%) had used condoms consistently for the previous 6 months compared to women in the other 2 settings (12% and 11%). Similarly, variation across settings was seen for contemplation of consistent contraceptive use to prevent unintended pregnancies. The variability in the distribution of condom and contraceptive use across settings underscores the importance of assessing readiness for behavior change and designing interventions that meet the specific needs of the populations being served. Courtesy of Population Information Program.

78. Pettifor A E, Rees H V, Beksinska M E, Kleinschmidt I, and McIntyre J. In vitro assessment of the structural integrity of the female condom after multiple wash, dry, and re-lubrication cycles. *Contraception* 2000;61(4):271-6.
79. Pool R. Acceptability of the female condom and vaginal spermicidal products in Uganda. *Sex Health Exch* 1999;(1):5-7.  
<http://popline.org/>  
Abstract: The Medical Research Council's Program on AIDS assessed the acceptability of the female condom and vaginal spermicidal products in Masaka, Uganda. The interviews and focus group discussions revealed that women are more likely to practice safer sex with female controlled methods that can be used secretly. The most popular formulations were the sponge and foaming tablets, followed by the female condom and foam. Age, level of education and location did not affect their choices. Expanding the range of choice among these women may improve the means of preventing HIV and sexually transmitted diseases. However, the possibility of secrecy, particularly female ownership of the product, was an important issue for women. Courtesy of Population Information Program.
80. Pool R, Whitworth JA, Green G, Mbonye AK, Harrison S, Wilkinson J, Hart GJ. An acceptability study of female-controlled methods of protection against HIV and STDs in south-western Uganda. *Int J STD AIDS* 2000;11(3):162-7.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=10726938&dopt=Abstract](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=10726938&dopt=Abstract)
81. Population Services International [PSI]. Social marketing with "Care" in Zimbabwe: female condom sparks early interest. *PSI Profile*. 1998 Mar:1-2.  
<http://popline.org/>  
Abstract: The social marketing company, Population Services International (PSI), introduced the female condom to Zimbabwe in July 1997. In Zimbabwe, where about 20% of the sexually active population and 30-40% of pregnant urban women are infected with HIV, women petitioned the government to make the female condom available so they could protect themselves from sexually transmitted diseases (STDs). However, because STD prevention has a negative image in Zimbabwe, the female condom--known as the Care contraceptive sheath--is being promoted for family planning purposes. Care retails for US\$0.24 for a box of two sheaths. 106,000 sheaths were sold in the first 4 months of product availability. Pharmacists report that as many men as women are purchasing the condom. At first, the product was sold only in locations with a provider who could instruct women in its use. Now that women are familiar with Care, the device is available at supermarkets and convenience shops. Care has been promoted extensively through newspapers and magazines; radio advertisements have featured endorsements by prominent health authorities. PSI plans to launch branded female condoms in Zambia, Tanzania, Brazil, South Africa, and Venezuela. Courtesy of Population Information Program.
82. Preston-Whyte EM. "Bring us the female condom": HIV intervention, gender and political empowerment in two South African communities. *Health Transit Rev*. 1995;5 Suppl:209-22.  
<http://popline.org/>  
Abstract: HIV/AIDS is spreading rapidly in South Africa and women are at

greater risk than men of contracting HIV infection. In this context, some Black African women are demanding the female condom. The author argues that this demand, not shared by all Black South African women, reflects the women's relative level of domestic and gender empowerment, as well as their high degree of political mobilization. The call for the availability of the female condom was also a challenge to the research community to rethink its position in research and to acknowledge the implications of committing to a participatory model of community-based intervention research. The interface between research and action, the KwaZulu women and AIDS project, the Woman and AIDS project, and lessons from Hlungwane are discussed. Courtesy of Population Information Program.

83. PRNewswire. Men, women want female condom, say delegates to UNAIDS meeting. Your Health Daily. 1998 Apr 24.

<http://popline.org/>

Abstract: This article highlights the acceptability of the female condom among countries in eastern and southern Africa. The meeting of the UN Joint Program on HIV/AIDS (UNAIDS) in Pretoria, South Africa on April 20-22, 1998, was devoted exclusively to the female condom and accelerating its use in developing countries. The results of the meeting were a unanimous decision from the 80 delegates of the 15 southern and eastern African countries to increase availability and accessibility of the female condom in the region. This decision was based on several studies conducted in the region, which revealed high acceptability of the female condom. Moreover, both men and women find female the condom to be satisfactory method of contraception and prevention of sexually transmitted diseases (STDs) and HIV. Furthermore, the UNAIDS has stated that female condom sales exceeded 4 million units in 1998 and that it is gaining recognition for its effectiveness. It has been reported that the female condom decreases the susceptibility to STDs by 34% compared with the use of the male condom. Thus, the female condom has been considered another method of dual protection and the only product controlled by a woman in the protection against STDs, HIV/AIDS, and unwanted pregnancy. Courtesy of Population Information Program.

84. Ray S, Bassett M, Maposhere C, Manangazira P, Nicolette JD, Machezano R, and Moyo J. Acceptability of the female condom in Zimbabwe: positive but male-centred responses. *Reprod Health Matters* 1995;(5):68-79.

<http://popline.org/>

Abstract: The Zimbabwe AIDS Prevention Project and the University of Zimbabwe Medical School's Community Medicine Department conducted baseline interviews, two follow-up interviews, and focus group discussions for the acceptability study of the female condom among 89 commercial sex workers in Masvingo, 84 urban women attending the family planning clinic of Harare Central Hospital, and 23 women in a rural area in western Zimbabwe called Gokwe. The leading reason for trying the female condom was protection from sexually transmitted diseases and HIV. All of the women were counseled, given a pelvic examination, and shown how to fit the female condom. 53% of the prostitutes, 14% of the urban women, and 22% of the rural women did not currently use any other contraceptive method. At first follow-up, 95% of the prostitutes, 76% of

urban women, and 57% of rural women had ever used male condoms. Almost all women liked the female condom very much or fairly well (97-100% for prostitutes, 95% for urban women, and 100% for rural women). More than 90% of prostitutes and rural women said that their steady partners also liked it (91-92% and 100%, respectively). The steady partners of 74% of urban women liked the female condom. In fact, most women claimed that they and their male partners preferred the female condom to the male condom (81-91% for prostitutes, 66% for urban women, and 100% for rural women). 68-82% of the prostitutes' clients liked the female condom. Reasons men like the female condom included no interruption, not responsible for protection, and something women could use. Leading problems experienced with the female condom were: inner ring uncomfortable during intercourse (0-3%), outer ring pushed into vagina (0-10%), and too much lubrication for a culture that traditionally prefers a dry vagina (6-31%). The main obstacle to female condom use was cost (25 vs. 10 cents to purchase a male condom, which can also be obtained free from primary health care clinics). Courtesy of Population Information Program.

85. Ray S and Maposhere C. Male and female condom use by sex workers in Zimbabwe: acceptability and obstacles. In: Beyond acceptability: users' perspectives on contraception, [compiled by] World Health Organization [WHO], Reprod Health Matters. London, England, Reprod Health Matters, 1997; p.97-108.

<http://popline.org/>

Abstract: Failure to recognize the role of women's low social and economic status in perpetuating the AIDS epidemic has led to short-sighted approaches to prevention. Poor women's lack of skills or options for negotiating safer sex practices with their partners has led to calls for women-controlled methods of protection against pregnancy and sexually transmitted diseases. As part of the Zimbabwe AIDS Prevention Project, two studies (1993 and 1995) were conducted to assess user perspectives. In the first study, urban sex workers who were also peer educators, urban family planning clinic clients, and a group of rural women were supplied with both male and female condoms. Over 80% of women in all three groups liked the female condom very much or fairly well; more than 65% of the women and 70% of their male partners liked it better than the male condom. The second study, comprised of sex workers who were not peer educators, found similar levels of acceptability from both women and their partners; however, the incidence of sexually transmitted infections and unprotected intercourse did not fall over the 10-month study period. The sex workers in the first study who were trained as peer educators were far more able to introduce female condoms to their clients than those in the second study without this training. In each study, use of both types of condoms was lowest in sexual relations with regular partners. Successful use of female condoms depends on a whole package of care, including positive promotion and publicity, support from health care workers, and involvement of both men and women as users of the method. Courtesy of Population Information Program.

86. Ruminjo J, Mwathe EG, Thagana N, Steiner M, and Joanis C. Consumer preference and functionality study of the Reality female condom in a low risk

population in Kenya. Research Triangle Park, North Carolina, Family Health International [FHI], 1991 Mar. [2], 9, [23] p. USAID Cooperative Agreement No. DPE-304-A-00-0043-00

<http://popline.org/>

Abstract: This study examined consumer preferences for and functionality of the Reality female condom (FC) among a low-risk population in Nairobi, Kenya. 48 women were recruited from among patients and staff of 3 obstetric and gynecology clinics in and around Nairobi. Participants were given instructions about insertion of the FC and 4 devices to be used over the following 3 weeks. Upon return to the clinic, the women were interviewed about their experiences with the FC and asked to participate in the next phase by using 4 FCs over the next 4 weeks and returning for an interview about acceptability. Data were analyzed for simple frequencies and cross tabulations. 38 women completed Phase I and 12 completed Phase II. The 2 main findings were that the FC was fairly acceptable, but there were physical problems with the device. Three of 113 FCs used broke. There were complaints about the FC not staying in place (7%), being pushed into the vagina (10%), or the penis thrusting between the outer ring and the vagina (4%). The problems raise questions about the efficacy of the FC for preventing sexually transmitted diseases and pregnancy. The breakage rate of 2.7% does agree with male condom breakage rates. If FCs are reused, then the durability of the FC needs improvement. 84% favored the FC. Women liked the FC because it felt good and offered protection. 68% disliked insertion; 42% disliked the messiness; and 26% reported a loss of sensation. About 50% of partners disliked the FC. 39% of partners liked the FC less than the male condom. 55% of women reported future intention to use the FC. Courtesy of Population Information Program.

87. Ruminjo JK, Steiner M, Joanis C, Mwathe EG, Thagana N. Preliminary comparison of the polyurethane female condom with the latex male condom in Kenya. *East Afr Med J* 1996;73(2):101-6.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=8756048&dopt=Abstract](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=8756048&dopt=Abstract)

88. Sai K. The female condom. *International agencies explore new option for HIV prevention. AIDS Captions* 1993;1(1):28-9.

<http://popline.org/>

Abstract: Heightened awareness of the effectiveness of condoms in preventing the sexual transmission of human immunodeficiency virus (HIV) has led to a 42% increase in worldwide production of male condoms over the last 4 years. However, women still face difficulties in convincing their partners to use this form of protection. The potential role of the female condom in acquired immunodeficiency syndrome (AIDS) prevention was addressed at a meeting co-sponsored by USAID and AIDSCAP and attended by 45 experts. The Reality female condom offers women the possibility of controlling their own protection from both pregnancy and sexually transmitted diseases (STDs) such as HIV. When used correctly, the female condom reduces the STD risk by 97%. The 6-month pregnancy rate during typical use has been estimated at 12% in the US and 22% in Latin America. Acceptability studies have found that 50-95% of

- participants liked using the female condom; 60% of women believed it would be easier to use the female condom than to suggest use of a male condom. A major obstacle to global distribution of the female condom is its high price: the best public sector price exceeds US\$0.88. On the other hand, demand has the potential to lower the price. Courtesy of Population Information Program.
89. Sapire KE. The female condom (Femidom)--a study of user acceptability. *S Afr Med J* 1995;85(10 Suppl):1081-4.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=8914556&dopt=Abstract](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=8914556&dopt=Abstract)
90. Sarkar NN. Acceptability and efficacy of the female condom: a new barrier method. *J Fam Welfare* 1996;42(2):41-8.  
<http://popline.org/>  
Abstract: The female condom offers women the potential both to prevent pregnancy and to protect themselves from sexually transmitted diseases, including HIV/AIDS. This article reviews the findings of international clinical trials on the efficacy and acceptability of this method. These trials have addressed the extent of protection and experience of current family planning users and their partners, the degree of vaginal discomfort and effect on vaginal flora, durability, use-effectiveness, and viral leakage. Consistent, correct use of the female condom is the most important determinant of contraceptive efficacy. Whether the female condom is used consistently over time seems to depend, in turn, on its availability and affordability, perceptions of personal risk, and ongoing insistence on and belief in protection of self and others. Courtesy of Population Information Program.
91. Schoeneberger M, Logan TK, and Leukefeld C. Gender roles, HIV risk behaviors, and perceptions of using female condoms among college students. *Population Research and Policy Review* 1999;18(1-2):119-36.  
<http://popline.org/>  
Abstract: This study was undertaken to examine the relationships between gender roles and HIV risk behavior, and perceptions and acceptance of the female condom among young adults. The samples included Introductory Sociology students: 152 males and 257 females, with an average age of 19 years, attending Mid-South State University. Results indicated that women who adhere to traditional gender roles were more likely to engage in risky sexual behavior, including anal sex, having more lifetime sex partners, and using alcohol and drugs before sex more often; while men who adhered to more traditional gender roles were more likely to report engaging in anal sex and having more lifetime sex partners. Furthermore, men who adhered to traditional gender roles also reported drinking more alcohol and were more likely to report ever experimenting with or using drugs. By incorporating gender roles and targeting gender role beliefs, HIV prevention interventions could better target behavior change. Future research is needed to further understand subgroups and to better target subgroups of individuals who differ on the dimension of adherence to traditional gender roles. Courtesy of Population Information Program.
92. Seal DW, Ehrhardt AA. Heterosexual men's attitudes toward the female condom. *AIDS Educ Prev* 1999;11(2):93-106.

- [http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=10214494&dopt=Abstract](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=10214494&dopt=Abstract)
93. Sinpisut P. Acceptability of the female condom amongst commercial sex workers in Thailand and Cote d'Ivoire (reply) [letter]. *Int J STD AIDS* 1999;10(12):830  
<http://popline.org/>  
Abstract: This letter to the editor presents the responses of the authors of the study on female condom acceptability among commercial sex workers (CSWs) in Thailand and Cote d'Ivoire to some of the questions and suggestions for clarification by Dr. F. Deniaud and Dr. J. C. Fampou-Toundji. In the context of study limitations, the authors state that the primary limitation was that the study was not an offshoot of a major WHO-GPA study on female condom. They further explain that the original study design was developed to explore the effectiveness of various strategies for CSWs to protect themselves against sexually transmitted diseases. Hence, the protocol for the recommendation of use of female condom was one of the options presented to the CSWs. In terms of use, no examination on the particular characteristics or conditions of use was conducted, but only focus on the total numbers of female condom use of the total sexual acts reported in order to assess overall frequency. Regarding the issue on the data of why female condoms were removed before completion of sexual intercourse, the authors agree with the proposed hypothesis on the causality. Courtesy of Population Information Program.
94. Sinpisut P, Chandeying V, Skov S, Uahgowitchai C. Perceptions and acceptability of the female condom. *Int J STD AIDS* 1998;9(3):168-72.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=9530904&dopt=Abstract](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=9530904&dopt=Abstract)
95. Sly DF, Quadagno D, Harrison DF, Eberstein IW, Riehman K, Bailey M. Factors associated with use of the female condom. *Fam Plann Perspect* 1997;29(4):181-4.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=9258651&dopt=Abstract](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=9258651&dopt=Abstract)
96. Smith JB and Lewis JH. The female condom. *IPPF Med Bull* 1998;32(3):1-2.
97. Stein Z, Saez H, el-Sadr W, Heaton C, Mannheimer S, Messeri P, Scimeca MM, Van Devanter N, Zimmerman R, Betne P. Safer sex strategies for women: the hierarchical model in methadone treatment clinics. *J Urban Health* 1999;76(1):62-72.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=10091191&dopt=Abstract](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=10091191&dopt=Abstract)
98. Stein Z and Susser M. Annotation: Prevention of HIV, other sexually transmitted diseases, and unwanted pregnancy -- testing physical barriers available to women. *Am J Public Health* 1998;88(6):872-4.  
<http://popline.org/>  
Abstract: Several barrier methods--male condom, female condom, vaginal diaphragm, and cervical cap--have been approved for contraceptive purposes yet none has been tested fully for protection against sexually transmitted diseases (STDs), including HIV. This annotation considers three issues salient to providing women with protection against HIV/STDs in a more timely manner. First, it is recommended that research guidelines be modified in the case of barrier methods

- to enable clinical trials to bypass testing for prophylactic efficacy--in part because rendering subjects blind to the method is an impossibility--and move immediately to tests of use effectiveness. Second, the current requirement of providing supplementary male condoms to all subjects in trials of the female condom should be reconsidered. Preferable would be provision of a hierarchy of method choices for female subjects based on their specific needs, to be measured against male condoms as the control group. Third, a shift in research design focus to the groups level is urged. In this case, the effectiveness of different programs, rather than of single specific methods for individuals in isolation, would be evaluated. Courtesy of Population Information Program.
99. Stigum H, Magnus P, Veierod M, Bakketeig LS. Impact on sexually transmitted disease spread of increased condom use by young females, 1987-1992. *Int J Epidemiol* 1995;24(4):813-20.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=8550280&dopt=Abstract](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=8550280&dopt=Abstract)
100. Stockbridge EL. Power and the female condom. *Fam Plann Perspect* 1996;28(2):78-9.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=8777944&dopt=Abstract](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=8777944&dopt=Abstract)
101. Surratt HL and Inciardi JA. Introducing the female condom to drug users in Brazil. *Population Research and Policy Review* 1999;18(1-2):169-81.  
<http://popline.org/>  
Abstract: This article presents the impact of the female condom on drug users in Brazil. The drop in the male/female ratio of cases (28:1 in 1984 to 2.7:1 in 1997) is evident that traditional approaches to HIV risk reduction have ineffectively met women's special needs. With this, female condom was introduced to drug-involved women in Rio de Janeiro. The sample was asked to try the female condom with their partners and to report outcomes at two points of contacts along. Individual pre-test on HIV prevention counseling and detailed education on female condom were provided for the study group. 71.1% of the sexually active women used the female condom during vaginal sex on one or more contacts. Moreover, 75% of the women reported being comfortable with female condom use. The 3-month follow-up interviews indicated high rates of female condom use for women who returned: 62.3% reported trying the condom at least once, and 43.4% reported continuous use. However, women residing in favelas (shantytowns) were less likely to continue using a female condom than were nonresidents, which is most likely due to the culture and the inferior and subservient roles that women occupy in favela life. Nevertheless, programs to promote female condoms need to be implemented for women at risk for HIV throughout Brazil. Courtesy of Population Information Program.
102. Susser I, Stein Z. Culture, sexuality, and women's agency in the prevention of HIV/AIDS in southern Africa. *Am J Public Health* 2000;90(7):1042-8.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=10897180&dopt=Abstract](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=10897180&dopt=Abstract)

103. Torres MI, Tuthill R, Lyon-Callo S, Hernandez CM, and Epkind P. Focused female condom education and trial: comparison of young African American and Puerto Rican women's assessment. *Int Q Community Health Educ* 1999;18(1):49-68.

<http://popline.org/>

Abstract: To obtain culture-specific information to guide the design of female condom education and distribution in transcultural urban US communities, 28 African American women and 24 Puerto Rican women living in Springfield, Massachusetts, were enrolled in a 30-day trial of this contraceptive method. The health education component of the trial emphasized use of the female condom to protect against HIV/AIDS, other sexually transmitted diseases, and pregnancy. During the 30-day trial, African American women used the female condom an average of 4.6 times compared with 5.7 times among Latinas. Puerto Rican respondents who did not use the device more than once were motivated primarily by their partner's objections, while African American women tended to focus on their own negative experiences. The majority of Puerto Rican women used indirect statements and progressive exposure to information when introducing the female condom to their partners, while African Americans were more open and direct. Most participants experienced initial difficulties with the insertion process, mechanics, and physical experience. Both groups of women agreed that female condom users should be provided with information addressing the following five areas: general information, mechanics of use, protective functions and effectiveness, ability to increase women's own protection, and partner negotiation. All participants indicated they would recommend the female condom to a friend, especially because of its ability to protect against HIV/AIDS, but African American women were more aggressive in promoting the method through established women's Networks in the community. Courtesy of Population Information Program.

104. Trussell J. Contraceptive efficacy of the Reality® female condom. *Contraception* 1998;58(3):147-8.

105. Trussell J, Sturgen K, Strickler J, and Dominik R. Comparative contraceptive efficacy of the female condom and other barrier methods. *Fam Plann Perspect* 1994;26(2):66-72.

<http://popline.org/>

Abstract: The research design for clinical trials of the female condom did not include randomization with another contraceptive method, so no one can definitely determine its contraceptive efficacy. Less formal comparisons with studies of other barrier methods reveal that the contraceptive efficacy of the female condom during typical use is not different from that of other vaginal barrier methods among US women. When researchers standardize probabilities of failure by parity and age, the diaphragm may be more effective than the female condom, the sponge, and the cervical cap during typical use. Yet, during perfect use, the contraceptive efficacy of the female condom is the same as that of the diaphragm, at least that of the cervical cap, and greater than that of the vaginal sponge. The clinical trial of the female condom did not include women with low coital frequency, included chemically confirmed pregnancies even when they

- were not clinically confirmed, and lost a much smaller percentage of the sample to follow-up than other clinical trials. Thus, one would expect the female condom to have higher failure rates than the other barrier methods, even if the contraceptive efficacies of the barrier methods matched. It is impossible to conduct statistical comparisons of the contraceptive efficacies of the female condom and the male condom because no carefully controlled clinical trials of the male condom have been conducted. The contraceptive efficacy of the female condom is probably similar to that of the male condom without a spermicidal lubricant, even though a superficial comparison with published probabilities of failure suggests otherwise. Extrapolations from results on contraceptive efficacy suggest that the female condom has the potential of reducing the annual risk of HIV infection by more than 90% among women having intercourse two times a week with an HIV-infected male. Courtesy of Population Information Program.
106. Tsopotsa T. Marketing the female condom in Zimbabwe: new methods and messages. In: Report from the Meeting on Changing Communication Strategies for Reproductive Health and Rights, December 10-11, 1997, Washington, D.C., [compiled by] Working Group on Reproductive Health and Family Planning. [New York, New York], Population Council, Health and Development Policy Project, [1998]; p.49-51.  
<http://popline.org/>  
Abstract: In 1997, Population Services International (PSI) began marketing the female condom in Zimbabwe, where HIV prevalence rates are high and women report an inability to control male promiscuity and infidelity. Sales in Zimbabwe to date have outstripped sales in all other related projects combined. Preintroduction acceptability research revealed a high level of knowledge about the product, that women aged 25-35 expressed the most interest in trying it, and that acceptability would depend upon male acceptance. PSI, therefore, attempted to make the female condom nonthreatening to men, dissociate it from the male condom, and create a respectable image for the product using the slogans "the Care contraceptive sheath is for caring couples" and "for women and men who Care." The condom was marketed for its contraceptive rather than disease-prevention aspects to reach women in long-term relationships and is distributed only in pharmacies and clinics to protect its reputation. The communications strategy included a press and radio campaign, advertisements, and posters. Because Care is being sold in record numbers, distribution will be expanded to other sites, interpersonal communications tools will be used to increase product comfort and knowledge, and promotion will focus on lifestyle issues and the dual nature of protection offered by the female condom. Additional research will shed light on the Care consumer and on perceptions about the communications campaign. Constraints are the necessity to subsidize the cost of the condoms, time required for sales, marketing respectability versus accessibility, and funding shortfalls. Courtesy of Population Information Program.
107. Van Damme L, Rosenberg ZF. Microbicides and barrier methods in HIV prevention. *AIDS* 1999;13 Suppl A:S85-92.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=10885766&dopt=Abstract](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=10885766&dopt=Abstract)

108. Winter J. Female condom sales beat forecast by 10 times. *AIDS Anal Afr* 1997;7(5):9  
<http://popline.org/>  
Abstract: The female condom has been on the market in Zimbabwe for 2 months, distributed by Population Services International (PSI) and Johnson & Johnson Co. Forecasts were made that 4000 female condoms, known as Care Contraceptive Sheaths in the country, would be sold every month. However, 80,000 have thus far been bought, ten times more than forecast. Tsitsi Tsopotsa of PSI believes that appropriate marketing has driven sales so far beyond expectations. Women associate the word "condom" with a stigma of sexually transmitted diseases and are therefore averse to buying condoms. Calling the female condom Care Contraceptive Sheaths has helped women accept and purchase the product. In an attempt to bring some prestige to the sheaths, they are sold only in pharmacies. Some men have bought the female condoms, but they are mainly consumed by women. The female condoms are advertised through "office parties" in which women working for a given company are invited to talk about "Care Sheaths." Care Contraceptive Sheaths are subsidized by the US and British governments such that they are sold at less than half cost. Courtesy of Population Information Program.
109. Winter J. Social marketing of condoms (female, too) gets going (again). *Zimbabwe. AIDS Anal Afr* 1997;7(2):6  
<http://popline.org/>  
Abstract: More than 10% of Zimbabwe's population is thought to be infected with HIV. Protector condoms, marketed by Johnson and Johnson (Zimbabwe), have been available in Zimbabwe for several years, but supplies often ran out due to contractual difficulties with the US Agency for International Development (USAID). Population Services International (PSI), with the financial support of Britain's Overseas Development Administration (ODA) and USAID, has relaunched the condom social marketing program in Zimbabwe and will also introduce female condoms for the first time in May. Selling for about Z\$1 (US\$0.09) each, the subsidized male condoms will be marketed in places where the public sector cannot go, such as gas stations, supermarkets, convenience grocery stores in high-density suburbs, beer halls, and night clubs. Approximately 5 million condoms are expected to be sold in 1997, although most condoms will still be supplied free of charge through the public sector. The female condoms will be priced at Z\$3 each. PSI hopes to sell 40,000 per year, while another 400,000 will be given away in hospitals, family planning clinics, and other public health services. Courtesy of Population Information Program.
110. Wisconsin Pharmacal Company. Reality, the female condom. Questions and answers. [Unpublished] 1993 Jul. 6 p.  
<http://popline.org/>  
Abstract: Wisconsin Pharmacal Company publishes a fact sheet on its over-the-counter female condom, Reality, in the form of questions and answers. These are grouped under availability, physical properties, use, and safety and effectiveness. Currently, Reality is only available to public sector clinics at a cost of \$1.25 each. After the US Food and Drug Administration approves the manufacturing facility

in London, it will be available for commercial sales. Each female condom will cost about \$2.50. Reality is sold in a box of 3 female condoms: a prelubricated condom, 2 unlubricated condoms, a bottle of water-based lubricant, and an instruction leaflet. The female condom is made of a thin polyurethane sheath which is impermeable to viruses and bacteria responsible for sexually transmitted diseases and AIDS. Each package has an expiration date of 18 months from manufacture. Under normal storage, heat, cold, humidity, and altitude do not affect Reality. Wisconsin Pharmacal Company advises removal of Reality after sex before standing. Reality is for one-time use. It can be used by women of all ages. The 6-month contraceptive study demonstrates that the overall pregnancy rate for Reality is 13%. The estimated one-year pregnancy rate is rather high (21-26%), probably due to incorrect use. The rip and tear rate is less than 1%.  
Courtesy of Population Information Program.

111. Witte S, el-Bassel N, Krishnan S, Schilling R, Bidassie B. Correlates of condom coupon redemption among urban sexually transmitted disease clinic patients. *Womens Health Issues* 1999;9(1):56-64.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=9949697&dopt=Abstract](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=9949697&dopt=Abstract)
112. Witte SS, el-Bassel N, Wada T, Gray O, Wallace J. Acceptability of female condom use among women exchanging street sex in New York City. *Int J STD AIDS* 1999;10(3):162-8.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=10340196&dopt=Abstract](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=10340196&dopt=Abstract)
113. Witte SS, Wada T, El-Bassel N, Gilbert L, Wallace J. Predictors of female condom use among women exchanging street sex in New York City. *Sex Transm Dis* 2000;27(2):93-100.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=10676976&dopt=Abstract](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=10676976&dopt=Abstract)
114. Wong ML, Chan RK, Chua WL, Wee S. Sexually transmitted diseases and condom use among female freelance and brothel-based sex workers in Singapore. *Sex Transm Dis* 1999;26(10):593-600.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=10560725&dopt=Abstract](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=10560725&dopt=Abstract)
115. World Health Organization and United Nations Programme on HIV/AIDS (UNAIDS). *The female condom: an information pack* 1st ed. 1997;40 p.
116. World Health Organization [WHO]. Special Programme of Research, Development and Research Training in Human Reproduction. *The female condom: a review*. Geneva, Switzerland, WHO, 1997. [6], 39 p.  
WHO/HRP/WOM/97.1  
<http://popline.org/>  
Abstract: This publication reviews current knowledge on the safety, effectiveness, and acceptability of the female condom. In addition, a strategy for introducing the female condom in developing countries is proposed and issues of cost and availability are reviewed. The female condom is important because it increases contraceptive choice and provides a nonsystemic, female-controlled method of contraception as well as protection from sexually transmitted diseases (STDs) and

HIV/AIDS. Because it is made of polyurethane, the female condom resists storage deterioration and use damage. It is safe for use, and the contraceptive effectiveness is in the same range as other barrier methods with user failure an important cause of poor effectiveness. Research also indicates that the female condom is an important additional tool for reducing the incidence of unprotected sexual intercourse and, thus, reducing transmission of STDs. It has been estimated that perfect use of the female condom can reduce the risk of HIV infection by 93%/year. Results of research on acceptability are summarized in tabular form by country, acceptability among users, acceptability among partners, and related findings. While the results of these studies are mixed, the method is acceptable to some women and men, including first-time family planning users. The steps for appropriate introduction of the female condom are to 1) assess user needs and service capabilities, 2) build support, 3) ensure availability, 4) develop a distribution plan, 5) train providers, 6) meet client information needs, 7) introduce the product, 8) monitor and evaluate services, and 9) disseminate evaluation results. The new public sector price of US \$1 will allow donor agencies to support introduction of the female condom in developing countries, and investigation on reuse to reduce price is ongoing to determine structural integrity, viral permeability, and microbial retention. Courtesy of Population Information Program.

117. Xu JX, Leeper MA, Wu Y, Zhou XB, Xu SY, Chen T, Yang XL, Zhuang LQ. User acceptability of a female condom (Reality) in Shanghai. *Adv Contracept* 1998;14(4):193-9.

[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=10075288&dopt=Abstract](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=10075288&dopt=Abstract)

118. Zimmers E, Privette G, Lowe RH, Chappa F. Increasing use of the female condom through video instruction. *Percept Mot Skills* 1999;88(3 Pt 2):1071-7.

[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=10485084&dopt=Abstract](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=10485084&dopt=Abstract)

119. Zufferey MM. Evaluation of the female condom. [Que penser du preservatif feminin?]. *Med Hygiene* 1992;50(1931):1285-9.

<http://popline.org/>

Abstract: The single-use female condom is 17 cm long and its biggest diameter is 75 mm. Its 0.55 mm thick polyurethane is less allergenic than is latex. The condom has a thin, very flexible, fixed ring, allowing it to cover the large labial lips. Another flexible but thicker ring with an interior diameter of 50 mm is at the other end. It holds the condom inside the vagina. The female condom is lubricated with a non-spermicidal silicone-based product. In vitro, neither HIV nor cytomegalovirus can penetrate the female condom. The female condom, Femidom, is sold in Switzerland in packs of three at Fr. 9.8. The woman pinches the interior ring as she inserts the female condom deep into the vagina. The interior ring is easily placed on the cervix and in the retro-pubic fossa. To remove the female condom, the woman must turn the external ring then slightly pull on the condom. One article reports that the failure rate of the female condom, Reality, is lower than that of the male condom (3% vs. 11.6%). The female condom is more solid and less apt to break, slip, and to be displaced than is the

male condom. Another study found that men were more likely than women to find the female condom, Femshield, easy to use (83% vs. 67%). Women were more likely than men to consider sexual pleasure to be the same as or better than that of the male condom (79% vs. 63%). More than one-third of the women felt the rings. 62% of men felt the interior ring. Principal advantages of Femidom are woman-controlled; interruption of coitus not required; prolonged sexual intimacy after ejaculation; protection against sexually transmitted diseases, AIDS, and pregnancy; and avoidance of pain during coitus in menopausal women. Disadvantages include high price, difficult usage for girls at first intercourse, and oily lubricant. Courtesy of Population Information Program.

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