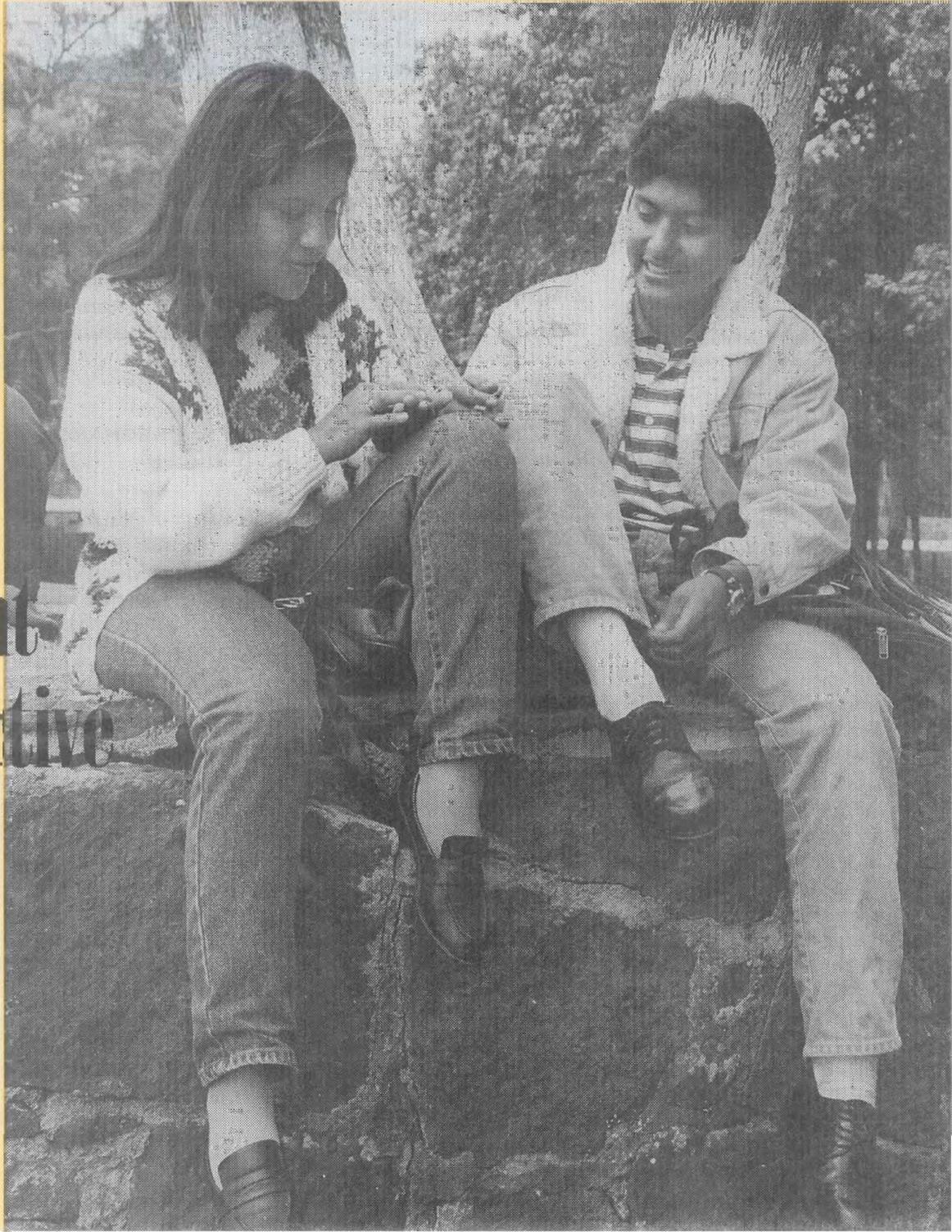


# Network

FAMILY HEALTH INTERNATIONAL, VOL. 17 NO. 3, SPRING 1997

## Adolescent Reproductive Health



# News Briefs

## PUBERTY BEGINS SOONER THAN THOUGHT

Girls in the United States are beginning puberty about a year earlier than was commonly believed, typically around ages 9 or 10, a new major study indicates.

Some girls start puberty even earlier. For example, nearly one-third of African-American girls in the U.S. study began to develop breasts or grow pubic hair before age 8. The new study found that African-American girls in the United States typically begin puberty about 12 to 18 months sooner than Caucasian girls.

Parents, health professionals and others should be aware of when puberty begins in order to advise girls and boys properly, says Dr. Marcia E. Herman-Giddens of the University of North Carolina at Chapel Hill (UNC), principal investigator of the study. "Parents and teachers need to look at how to start teaching children much earlier about how their bodies are changing," she says.

Researchers from UNC, the American Academy of Pediatrics and University of Puerto Rico analyzed data from doctors' office visits by 17,000 girls ages 3 to 12. Results appear in the April 1997 issue of the journal *Pediatrics*. Previously, a 1968 study among 200 girls in the United Kingdom had been considered the definitive study, placing the beginning of puberty for girls at about ages 11 or 12.

The age at menarche in the study, however, is consistent with previous findings in U.S. studies, Dr. Herman-Giddens says. Because there is no earlier

onset of menstruation and subsequent ovulation necessary for fertility, an early onset of puberty does not mean U.S. girls face an earlier risk of unplanned pregnancy or infection from sexually transmitted diseases. Average ages for the onset of menstruation in the study were 12 years, two months for African-American girls and 12 years, 10 months for Caucasian girls.

Although the research is the largest of its kind, Dr. Herman-Giddens warns that the study population was not randomly selected and participants were not followed over time.

## ZIMBABWE RECEIVES FEMALE CONDOMS

A shipment of 100,000 female condoms was sent to Zimbabwe in April, making the product available for the first time in that country.

The Zimbabwe Drug Council approved registration of the female condom in 1996. A petition by more than 30,000 women's health activists asked that it be made available.

Under an agreement between the Joint United Nations Programme on HIV/AIDS (UNAIDS) and the manufacturer, the U.S.-based Female Health Company, female condoms will be available at a significantly lower price compared with retail prices in developed countries where available. Similar shipments to other developing countries were being arranged, according to the company.

The female-controlled device, made of polyurethane, was approved for use as a contraceptive in the United States in 1993. More research is needed to determine its ability to prevent HIV or sexually transmitted diseases (STDs), but the method is considered a promising option for STD prevention.

Consistent and correct use of latex male condoms is considered the best STD prevention for couples at risk of STDs. However, some men refuse to use male condoms. The female condom may offer another prevention option that women can initiate.

In a related development, the U.S. Food and Drug Administration recently extended the shelf life for the female condom to five years, from three years. Shelf life refers to how long a product is known to remain safe and effective after it is manufactured.

## ECTOPIC PREGNANCY RISK

A new study of tubal sterilization concludes that the risk of ectopic pregnancy is relatively high among the very few sterilized women who later become pregnant.

Tubal sterilization is safe and highly effective, with a failure rate of only 2 percent over 10 years. Because failure rates are so low, the actual number of ectopic pregnancies is also quite low. But when pregnancy does occur following sterilization, the risk of an ectopic pregnancy is about one in three, according to the study published in the March 13, 1997 issue of *New England Journal of Medicine*.

Authors of the study emphasized that the research was conducted in teaching hospitals in the United States. Because

the women were not randomly selected from all women undergoing sterilization in the United States, the results may not apply to the general U.S. population, nor to populations in other countries.

"The new study is important because it reminds us that pregnancy can and does occur after tubal sterilization, and that ectopic pregnancy — a very serious medical condition — is a possibility," says Dr. Amy E. Pollock, president of AVSC International, a nonprofit organization that promotes better family planning services, including voluntary sterilization.

Any woman considering a tubal sterilization should take this risk into account when making her decision, Dr. Pollock says. Similarly, a woman who has already had the procedure and the providers who care for her need to be aware of the potential risk and the signs of ectopic pregnancy. Those signs include missed periods, abdominal pain, or irregular vaginal bleeding.

In ectopic pregnancy, implantation of the embryo occurs outside the uterus, usually in the fallopian tube. The condition can be serious, even life-threatening, and requires immediate medical attention.

The greatest likelihood of ectopic pregnancy occurred in women who were younger than 30 years and who had sterilization by bipolar coagulation, a method that uses electrical current to block the fallopian tubes. Some of the women included in the study were enrolled as long ago as 1978, and bipolar coagulation techniques have been improved since that time. In addition to using electrical current, doctors may also block the tubes using suture materials, clips or bands.

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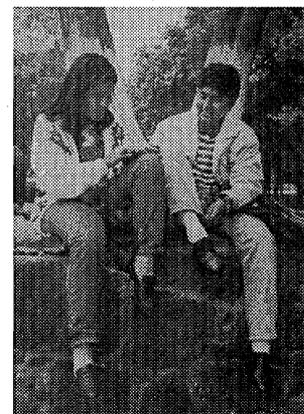
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*Young women and men worldwide are especially vulnerable to reproductive health problems, including early or unplanned pregnancies and infection by sexually transmitted diseases. Cover photo by Beryl Goldberg shows students at a university campus in Mexico City.*



# FHI Study Examines N-9 Film Effect on STDs

**A** two-year FHI study has concluded that vaginal spermicidal film is safe to use but does not confer any additional protection to women from HIV, gonorrhea or chlamydia infection beyond the protection provided by condoms.

FHI collaborated with the Cameroon Ministry of Public Health to conduct the study in the African country. The research, designed to assess a spermicidal film containing nonoxynol-9 (N-9), did not address whether N-9 film used alone offers STD protection. Ronald E. Roddy, MPH, an FHI epidemiologist, and Leopold Zekeng, PhD, a Cameroon ministry HIV specialist, were the principal investigators.

Latex condoms offer the best STD protection for people at risk, but many women are unable to persuade their partners to use them. FHI believes protective measures that are used and controlled by women are urgently needed.

"Unfortunately, the news is not good for women, since we had hoped N-9 might increase their available options for HIV protection," says Willard Cates Jr., MD, MPH, FHI's senior vice president for biomedical affairs. "We must accelerate research dedicated to finding new methods for women at risk of HIV and other STDs." HIV is the virus that causes AIDS.

N-9 is available worldwide in many formulations, including foams, gels, suppositories and creams. Women who use diaphragms, for example, typically apply N-9 cream or jelly to the diaphragm, and some latex condom lubricants include N-9. None of these other products were examined in the study. Also, the study only examined women and did not consider whether N-9 film protects men.

The study was supported by a \$1.6 million grant from the National Institute of Allergy and Infectious Diseases (NIAID). "Correct and consistent condom use is highly effective, but women must depend on the willingness of their partners to use male condoms," says Dr. Rodney Hoff of NIAID's AIDS prevention program. "We and other public health officials are committed to developing an STD/HIV prevention method that can be controlled by women. This study is one part of that ongoing effort."

FHI believes the study is the most thorough examination to date involving an N-9 spermicide and the role spermicides play in protecting women against STDs. The finding raises doubts about the additional benefit from using N-9 film as a prophylactic against STDs with condoms. It does not alter FHI's advice to people who are at risk from infection with HIV or other STDs — they should use latex condoms correctly and consistently. An alternative option for many women is to use the female condom, which may provide STD protection if used consistently and correctly. Abstinence or a mutually monogamous relationship between uninfected partners are the most reliable ways of preventing STD infection.

Earlier, smaller N-9 studies had suggested that N-9 may reduce the risk of bacterial STD infections, but were inconclusive about whether N-9 prevents HIV infections. The new study involved 1,292 sex workers in Cameroon who volunteered at clinics to take part in the study between March 1995 and December 1996. To be eligible, the women could not be infected with HIV at the time they entered the study. Of the eligible volunteers, 478 who were provided a contraceptive film containing N-9 and 463 who were provided a placebo film that did not contain a spermicide, completed the study.

Each woman who asked about participating in the study received counseling to discourage her from continuing as a sex worker (prostitution), an activity that places one at great risk of acquiring HIV or other STD infections.

Volunteer participants who remained at risk were given condoms and urged to use them with every act of intercourse. They received a new supply of condoms frequently, and were examined monthly and treated for infections.

"The Cameroonian study staff strongly urged volunteers to practice safer sex," says Dr. Zekeng of Cameroon. Volunteers from the cities of Yaoundé and Douala received thorough counseling and were asked to return monthly for medical attention, which FHI believes significantly reduced the risks they otherwise would have faced. "Study participants were helped to adopt protective behaviors, which reduced their rate of infection by more than 50 percent," Dr. Zekeng says.

For the women completing the study, 147,996 acts of sexual intercourse in the group using N-9 film and condoms were

compared with 146,942 acts in the group provided with the placebo film and condoms. The rate of HIV transmission was nearly the same for both groups. For every 100 women using N-9 film and condoms for one year (100 woman-years), 6.7 became infected with HIV, compared with 6.6 HIV infections using the placebo film and condoms.

The comparable rates for gonorrhea infections were 33.3 infections for N-9 and condoms to 31.1 for placebo film and condoms per 100 woman-years. Infection rates for chlamydia were 20.6 for N-9 and condoms and 22.2 for placebo film and condoms per 100 woman-years.

A theoretical concern has been whether frequent use of N-9 may increase the risk of STD infections, since frequent use of the chemical may cause sores that could enhance transmission. Women in the study reported using the film more frequently than do most women who use N-9. This study did not show any increased risk of HIV or other STD infections from using N-9 film, although genital lesions (sores) did occur

slightly more often among women who used N-9. There were 42.2 lesions per 100 woman-years among women using N-9 and condoms, compared with 33.5 lesions among women using the placebo film and condoms.

The study has certain limitations. Because of the paramount concern for the safety of participants, they were counseled to use condoms every time they had sex, the only proven method of protection. Since few women reported using film without condoms, the study cannot conclusively address whether N-9 film alone offers any protection from HIV or other STDs.

Worldwide, about two thirds of all HIV-infected people live in the sub-Saharan region of Africa. One benefit of the study is that it demonstrates that HIV prevention research among people at high risk of infection can be done according to the highest ethical standards.

The film used in the study is made by Apothecus Pharmaceutical Corp., Oyster Bay, NY and is available under the brand name of VCF Vaginal Contraceptive Film.

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## N-9 CONTRACEPTIVE FILM AND THE RISK OF STDs

The following questions and answers are grouped to address typical questions involving general information about N-9; the recent study by FHI and the Cameroon Ministry of Public Health; and the public health policy implications.

### General information

*What is nonoxynol-9 (N-9)?*

Nonoxynol-9 (N-9) is a detergent-like chemical that has been used for more than 40 years in vaginal products to prevent pregnancy. N-9 prevents pregnancy by disrupting the outer surface of sperm, resulting in its death. Because N-9 kills sperm, it is known as a spermicide.

*What products contain N-9?*

In the United States, N-9 is found in a variety of vaginal spermicides including gels, creams, foams, suppositories, and film.

Some of these products are meant to be used by themselves and others are meant to be used with a diaphragm or cervical cap. In other countries, N-9 is also found in spermicidal foaming tablets. N-9 is also added to certain lubricated condoms.

*Do all spermicides contain N-9?*

No, but most spermicidal products sold in the United States use this chemical. Other common spermicides used around the world are menfegol, a chemical used in spermicidal foaming tablets (widely used in Asia) and benzalkonium chloride (BZK), the ingredient widely used in products manufactured in France.

*Is N-9 safe to use as a contraceptive?*

Yes. In 1980, based on three decades of clinical experience, the U.S. Food and Drug Administration (FDA) determined

that N-9 is safe and effective as a vaginal contraceptive. The safety of N-9 for vaginal use is based both on animal safety testing and on the absence of reported adverse reactions over decades of experience in humans using N-9-containing spermicidal products for contraception. For some women, N-9 causes vaginal itching and burning, which ceases when they stop using the product. N-9 may also cause similar symptoms in male sexual partners.

*Are all N-9 products the same?*

No. These products are available in different formulations, as gels, creams, foams, suppositories, and film. Also, spermicidal products on the market use different concentrations of N-9 (ranging from 52.5 mg to 150 mg for a typical dose). The film used in the FHI-Cameroon N-9 film trial contains 70 mg of N-9.

*Continued on page 6*

## N-9 FILM

Continued from page 5

### Cameroon study results

*Why are scientists examining N-9, a contraceptive, as a way to prevent STDs?*

In the laboratory, N-9 kills HIV and other STD pathogens by disrupting the outer coat of the viruses and bacteria that cause the diseases, thereby killing these organisms. Also, small studies among people using N-9 have suggested that the contraceptive may protect against STDs. However, the ability of N-9 to prevent HIV or other infections in actual use had not been rigorously studied.

Another concern about the use of N-9 to prevent STDs is whether frequent use of N-9, or use in high concentrations, may actually increase the risk of STD transmission. Frequent use or high concentrations can irritate the cells that line the vagina and cervix (epithelial disruption) causing inflammation, which could theoretically lead to easier access by HIV or other microorganisms.

*What did the FHI-Cameroon study conclude about N-9 and STD infections?*

This two-year study concluded that using N-9 film in settings where a high percentage of sex acts were protected by condoms does not offer women any protection against HIV, gonorrhea or chlamydia, in addition to that protection conferred by condoms alone. The study also concluded that using N-9 did not increase the risk of being infected by these STDs. The study could not determine if spermicidal film used alone offers STD protection.

*Have these results been published in a scientific journal?*

Not yet. A careful epidemiological analysis of the study data has only recently been completed, and this analysis has not yet been published. As with all FHI research, our findings will be submitted to appropriate peer-review scientific journals to be considered for publication. Because this study gives new, vitally important insights into N-9 use and STD prevention, FHI believes its findings should be made available immediately, so that women who might depend upon N-9 for STD protection are aware of this research.

*How was the study conducted to reach these conclusions?*

The study involved 1,292 sex workers (prostitutes) in Cameroon who volunteered at clinics to take part in the study between March 1995 and December 1996. All women who considered volunteering were strongly encouraged to discontinue their risky behavior (multiple partners), since this places them at great risk for STD infection. Those who continued their risky behavior and who were enrolled in the study were given condoms frequently, and urged to use them with every act of intercourse.

factors, including the number of sexual acts and whether condoms were also used, a rate of STD transmission was determined for each group and these rates were compared.

*Were study participants paid?*

No. Participants received free medical examinations, care and counseling, free condoms and N-9 or placebo film, and were reimbursed modest transportation costs to clinics.

*Who conducted the study?*

The study was conducted by research scientists at the Cameroon Ministry of Public Health and Family Health International, a

JULIA BEAMISH/FHI



VCF VAGINAL CONTRACEPTIVE FILM CONTAINS N-9.

To be eligible, women could not be infected with HIV when enrolled. Volunteer women in the study were assigned to use either the N-9 film or a placebo (inactive) film, prior to having sexual intercourse. The difference between the two films was explained to them, but participants did not know whether they were using N-9 film or the placebo. The volunteers were periodically assessed for infection with HIV or other STDs, and were asked about any symptoms that might be ascribed to film use.

Of the eligible volunteers, 478 completed the study using a contraceptive film containing N-9 and 463 completed the study using a placebo film that did not contain the spermicide. Based on a careful statistical analysis that considered numerous

nonprofit research organization that specializes in reproductive health. It was sponsored by the U.S. National Institute of Allergy and Infectious Diseases (NIAID).

*Who approved this study?*

The scientific importance of the study was reviewed and approved by a group of non-government scientists who recommended that NIAID fund the study. Prior to starting the study, the study protocol was reviewed and approved by ethical review boards in Cameroon and at Family Health International. At FHI, a Protection of Human Subjects Committee monitors all research involving people. The eight voting members of the FHI panel are not FHI employees and

come from a variety of professional backgrounds, including law, consumer interests and the clergy.

In addition, NIAID reviewed the study to assure that it met U.S. government regulations for biomedical research. To assure that the study was being conducted in an ethical manner and that the volunteers were not being exposed to undue risks, intermediate results during the course of the research were reviewed by NIAID's independent Data and Safety Monitoring Board, which is composed of scientists from universities and other institutions that were not involved in the study. The U.S. Food and Drug Administration (FDA) was not asked to approve this study because the manufacturer was not seeking specific FDA approval for use of this film in preventing HIV.

*Who paid for this study, and how much did it cost?*

The study was financed with a \$1.6 million grant from the U.S. National Institute of Allergy and Infectious Disease (NIAID). The U.S. Agency for International Development and the Mellon Foundation provided financial support for development of the study.

*Why was the study done in Africa and not in the United States?*

In general, research involving infectious disease is conducted among people who are most exposed to the disease. Two of every three HIV-infected people worldwide live in sub-Saharan Africa. Among sex workers in sub-Saharan Africa, the risk of HIV infection is especially high. Because of the study's paramount concern for encouraging condom use and reducing the risk of infection, a desirable consequence of doing the study in Cameroon was to promote prevention strategies among women who are at great risk of HIV infection. Conducting the study in Cameroon not only improves scientific quality, but reduces the risk of HIV and other STD infections for participants.

*Why was the N-9 contraceptive film studied, and not other N-9 products?*

The N-9 film was chosen because it offers a low dose of N-9 (70 mg of N-9), thereby minimizing potential irritation to the vaginal tissue. Also, it is already available over the counter in the U.S., has a good safety profile, and it is relatively easy to use. The

relatively low cost of the product suggested that it had a better chance of being available for use in developing countries such as Cameroon if it were found to be effective in preventing STDs. The film used in the study is manufactured by Apothecus Pharmaceutical Corp., a U.S. company based in Oyster Bay, NY. In the United States, the film is available over-the-counter in more than 25,000 drug stores and pharmacies and is provided by more than 6,000 family planning clinics, according to the company. The film sells under the brand name of VCF Vaginal Contraceptive Film.

#### **Public health implications**

*What are the implications of this study for people at risk of HIV and other STDs?*

Unfortunately, this study is not encouraging for people at risk of STDs, especially for women who cannot persuade their partners to use latex condoms. For these women, the female condom is one option that may provide STD protection if used consistently and correctly. FHI believes research to develop new options for protecting people from HIV and other STDs is urgently needed.

Anyone at risk of STDs should be aware that correct and consistent use of latex condoms is considered the best protective measure. Abstinence and a mutually

monogamous relationship between uninfected partners are considered the most reliable ways of avoiding infection.

*What does the U.S. Centers for Disease Control and Prevention (CDC) currently recommend regarding the prevention of HIV infection?*

Currently, the CDC recommends that latex condoms with or without spermicides should be used to prevent HIV transmission among sexually active individuals at risk. FHI strongly supports this recommendation. No data currently exist to indicate that condoms lubricated with spermicides are more effective than other lubricated condoms in protecting against transmission of HIV and other STDs.

*Are there other studies of N-9 products in progress?*

Yes. A study is under way in Kenya to evaluate the efficacy of a low-dose N-9 gel in preventing HIV transmission. Another study of the same N-9 gel, sponsored by the Joint United Nations Programme on HIV/AIDS (UNAIDS) program, is also under way in several countries in Africa and Asia. A preliminary study to determine the safety of N-9 gel when used rectally is under way in the United States.

### **SELECTED RESEARCH INVOLVING N-9 AND STDs**

The following is a chronological bibliography of key studies on nonoxynol-9 (N-9) and prevention of sexually transmitted diseases (STDs). In all prospective studies where volunteer participants were at risk of HIV, participants were encouraged to use latex condoms consistently and correctly, the best protection for people at risk of STDs, and they were counseled about STD risks and ways to reduce their risks. Participants were frequently examined for STDs and were treated.

**Zekeng L, Feldblum PJ, Oliver RM, Kaptue L. Barrier contraceptive use and HIV infection among high-risk women in Cameroon. *AIDS* 1993; 7(5):725-31.**

An observational study conducted among 273 female sex workers in Cameroon concluded that women who used N-9 or latex condoms consistently had a significant reduction in HIV infection rates—the first time a study had reported epidemiological evidence that N-9 may protect against HIV. Half of the women reported using condoms for 63 percent or more of sexual acts, while half reported using spermicide for at least 67 percent of coital acts. Volunteer participants were advised to use non-spermicidal male lubricated

condoms and a vaginal suppository containing 100 mg of N-9 each time they had sexual intercourse. The study, which lasted 12 months, was conducted by the National AIDS Control Service in Yaoundé and Family Health International.

A later analysis of this data concluded that use of vaginal N-9 suppositories did not increase the incidence of genital ulcers. Previous research had suggested that frequent N-9 use can lead to genital irritation and ulceration. Ulcers could be a possible risk factor for HIV. **(Weir SS, Roddy RE, Zekeng L, Feldblum PJ. Nonoxynol-9 use, genital ulcers, and HIV infection in a cohort of sex workers. *Genitourin Med* 1995; 71:78-81).** Another examination of the data set concluded that

*Continued on page 8*

## SELECTED RESEARCH

Continued from page 7

male latex condoms offered significant protection against gonorrhea. (Weir SS, Feldblum PJ, Zekeng L, Roddy RE. The use of nonoxynol-9 for protection against cervical gonorrhea. *Am J Public Health* 1994; 84(6):910-14.)

Feldblum PJ, Weir SS. The protective effect of nonoxynol-9 against HIV infection (letter). *Am J Public Health* 1994; 84(6):1032-34.

Reanalysis of data collected among sex workers in Cameroon reaffirmed findings from the original observational study that N-9 use may offer some protection against HIV. The reanalysis, conducted by FHI, found that the more consistent the use of N-9, the lower HIV rates were. Researchers also found that the rate of HIV infection decreased as condom use increased.

Kreiss J, Ngugi E, Holmes K, Ndiya-Achola J, Waiyaki P, Roberts PL, Ruminjo I, Sajabi R, Kimata J, Fleming TR, Anzala A, Holton D, Plummer F. Efficacy of nonoxynol 9 contraceptive sponge use in preventing heterosexual acquisition of HIV in Nairobi prostitutes. *JAMA* 1992; 268(4):477-82.

A randomized controlled trial of N-9 contraceptive sponge use among sex workers in Nairobi, Kenya concluded that the N-9 sponge did not appear to protect against HIV. Women who used the N-9 sponge had a three-fold increase in incidence of genital ulcers, which has been considered a risk factor for acquisition of HIV, and a higher risk of vulvitis. However, N-9 users had a 60 percent reduced risk of gonorrhea, said the study's researchers from the University of Washington at Seattle, University of Nairobi, University of Manitoba, and Kenya Medical Research Institute. Seventy-four women were randomly assigned to use the N-9 polyurethane sponge. Women were asked to insert the sponge each day before having sex, to use one sponge for two to three sex partners, and to remove the last sponge six hours after last sexual intercourse. Sixty-four women were told to insert a placebo glycerine vaginal suppository (later a water-based vaginal cream) once daily before intercourse with their first sex partner of the day.

Niruthisard S, Roddy RE, Chutivongse S. Use of nonoxynol-9 and reduction in rate of gonococcal and chlamydial cervical infections. *Lancet* 1992; 339:1371-75.

The effects of N-9 in preventing chlamydia and gonorrhea were examined in this 1990 randomized controlled trial, which was conducted in Bangkok, Thailand by FHI and Chulalongkorn University. Researchers compared infection rates among 186 women who used N-9 film and condoms with 157 women who used condoms and a placebo film. Volunteer participants were women who worked at massage parlors and had an average of two to three sexual partners per day. Research-

ers found that, overall, use of N-9 decreased the rate of gonococcal and chlamydial cervical infection by 25 percent. For women who used N-9 for more than 75 percent of sexual acts, the rate of infection declined by 40 percent. For women who used N-9 for fewer sexual acts, N-9 appeared to offer little protection from cervical infection. Condoms offered greater protection against gonorrhea and chlamydia than did N-9 alone. There was no difference in the development of genital ulcers or vaginal yeast infections in either group. N-9 users complained more frequently about genital irritation, including burning, itching, and soreness, although symptoms were not considered severe.

Rosenberg MJ, Rojanapithayakorn W, Feldblum PJ, Higgins JE. Effect of the contraceptive sponge on chlamydial infection, gonorrhea and candidiasis: a comparative trial. *JAMA* 1987; 257(17):2308-12.

Women who used the N-9 sponge had lower rates of chlamydia (29 percent of sponge users and 51 percent of nonusers after seven weeks) and the incidence of gonorrhea was also lower among sponge users (8 percent in the N-9 group compared with 40 percent in the control group) in a randomized controlled trial in Bangkok, Thailand among 492 sex workers from massage parlors. Sponge users had a higher incidence of candidiasis than nonusers (12 percent versus 4 percent, respectively). Half of the volunteer participants were assigned to use the N-9 sponge while 246 were assigned to the control group. Women were asked to continue their regular family planning method, in most cases oral or injectable contraceptives, and encouraged to use condoms. The study was conducted by FHI and the Thai Ministry of Public Health.

Louv WC, Austin H, Alexander WJ, Stagno S, Cheeks J. A clinical trial of nonoxynol-9 for preventing gonococcal and chlamydial infections. *J Infect Dis* 1988; 158:518-23.

In this randomized controlled study of 818 women, researchers from the University of Alabama at Birmingham and Jefferson County Department of Health, Birmingham, evaluated the ability of N-9 to prevent gonorrhea and chlamydia. Study participants were clients at clinics that treat sexually transmitted diseases. One group of participants was asked to use a commercially available spermicide gel containing N-9, while the control group was asked to use a placebo. After six months, researchers concluded that women who used N-9 were less likely to develop gonorrhea or chlamydia than women in the placebo group. The more consistent was the N-9 use, the lower were the rates of cervical infection. A second study, published in the *American Journal of Obstetrics and Gynecology* in August 1990, evaluated spermicide use among the same group of women and found that women who used N-9 had a lower incidence of trichomoniasis and bacterial vaginosis than did women in a placebo group. There was no difference in the incidence of candidiasis.

Kelaghan J, Rubin GL, Ory HW, Layde PM. Barrier-method contraceptives and pelvic inflammatory disease. *JAMA* 1982; 248(2):184-87.

Researchers at the U.S. Centers for Disease Control and Prevention found that women who used barrier contraceptives (condoms, N-9 spermicides, diaphragms with N-9 spermicide) were less likely to develop pelvic inflammatory disease (PID) than women who used other contraceptives or no contraceptives. PID is a serious illness for women and can lead to infertility or death. Researchers analyzed the data from the Women's Health Study, a large multicenter case-controlled study conducted in the United States from 1976 to 1978. Researchers compared the contraceptive methods used by 645 women hospitalized for PID with the methods used by 2,509 women with no history of PID.

### Further reading

Centers for Disease Control and Prevention. Update: barrier protection against HIV infection and other sexually transmitted diseases. *MMWR* 1993; 42(3): 589-91, 597.

This paper summarizes several scientific studies that have concluded that male latex condoms can effectively protect against HIV transmission. For couples who are serodiscordant (one is HIV-positive and the other is HIV-negative), using latex condoms consistently and correctly reduced the risk of HIV transmission. Latex condoms reduced the risk of gonorrhea, herpes simplex, genital ulcers and pelvic inflammatory disease. Latex condoms also provided a physical barrier against transmission of hepatitis B, chlamydia and gonorrhea.

Feldblum PJ, Morrison CS, Roddy RE, Cates W Jr. The effectiveness of barrier methods of contraception in preventing the spread of HIV. *AIDS* 1995;(Suppl A): S85-S93.

This article gives an overview of research on chemical and physical barrier methods and their ability to prevent sexually transmitted diseases, including *in vitro* and *in vivo* data on male condom use and spermicide use and information on irritation, consistency of use, and future research needs.

Elias CJ, Coggins C, Atisook R, Bassett MT, Ettiegné-Traore V, Ghys PD, Jenkins-Woelk L, Thongkrajai E, VanDevanter NL. Women's Preferences Regarding the Formulation of the Over-the-Counter Vaginal Spermicides. Presentation at the XI International Conference on AIDS. July 7-12, 1996. Vancouver, Canada.

A survey of 138 women in Cote d'Ivoire, Thailand, United States and Zimbabwe on their preferences for spermicide formulations (gel, suppository, film) found that women's preferences were influenced by such factors as lubricant or drying effect, effects on sexual pleasure and frequency of use.

# Adolescent Reproductive Health

Worldwide, young women and men suffer a disproportionate share of unplanned pregnancies, sexually transmitted diseases (STDs), including HIV, and other serious reproductive health problems.

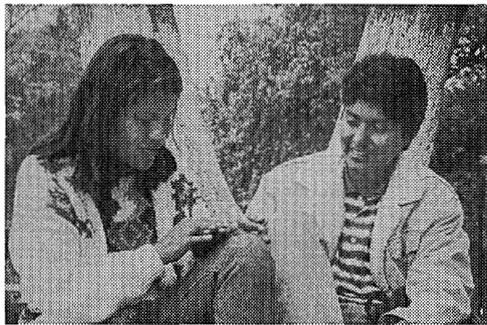
About one-half of all HIV infections worldwide occur among people age 25 and under, according to the World Health Organization (WHO). In industrialized countries, two of every three STD infections occur among people under 24 years of age, and the proportion of infected youth in developing countries is believed to be even higher.<sup>1</sup>

More than 10 percent of all births each year are to women ages 15 to 19, according to the Washington-based Population Reference Bureau (PRB). Even when pregnancy among young married women is planned, the health risks for teenage mothers and their babies can be serious. Because their bodies are not fully mature, the risk of maternal mortality is two to four times higher for pregnant adolescents than for pregnant women over 20. Infant mortality also is greater among adolescent mothers—typically 30 percent higher for infants born to women ages 15 to 19 than for those born to women 20 or older.<sup>2</sup>

Approximately 2 million adolescent women in developing countries undergo unsafe abortions each year,<sup>3</sup> and a third of all women seeking hospital care for abortion complications are under age 20. For young women who undergo unsafe abortion, short-term health problems can include infection or injuries from the procedure itself, such as a perforated uterus, cervical lacerations or hemorrhage. Long-term complications include increased risk of ectopic pregnancy, chronic pelvic infection and possible infertility.

In the following articles, *Network* examines several issues that influence the quality of reproductive health services for this vulnerable age group:

BERYL GOLDBERG



- **Gender perspectives**, which are largely defined by social and cultural conditions, shape the way adolescents view sexuality and play an important role in gaining access to information and services.

- **Sexual health education** typically delays the initiation of sexual activity among youth, and helps them to avoid risky behaviors when activity begins.

- **Youth programs** that succeed tend to share certain traits, such as involving young adults, parents and community leaders during planning.

- **Psychological and social pressures** that youth often face are important considerations when providing reproductive health services.

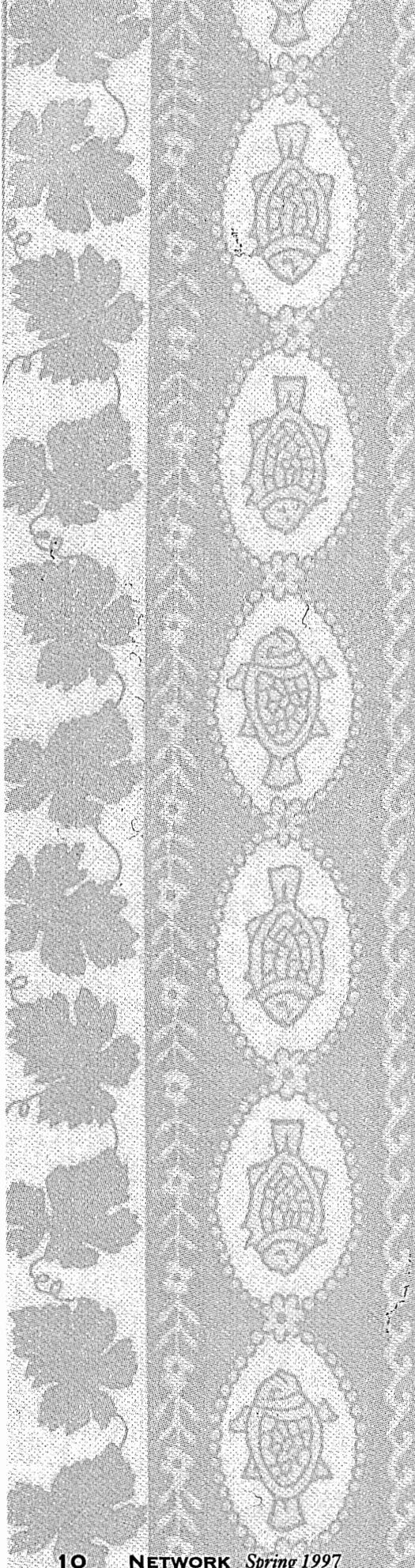
- **Media**, including posters, drama, broadcasting and publications, can inform young people about important reproductive health concerns and where to obtain services.

Also included in this issue is a chart of contraceptive methods, with considerations for the use of each method by adolescents.

Defining the ages of “adolescence” and “adulthood” often varies from one culture to another. Adolescence typically begins with puberty in most cultures, but the age when people are considered adults varies. A young woman attending school may still be considered an adolescent in one country, while her counterpart of the same age in another may be married, beginning a family and considered an adult. In this issue of *Network*, the term “young adults” is often used to embrace both adolescents and people who are in the early years of their adulthood—people in their late teens in some cultures, or early 20s in others.

## REFERENCES

1. Cates W, McPheeters M. Adolescents and sexually transmitted diseases, current risks and future consequences. Presented at the *Workshop on Adolescent Sexuality and Reproductive Health in Developing Countries: Trends and Innovations*, National Research Council, March 25, 1997, Washington.
2. *Risks and Realities of Early Childbearing Worldwide: Issues in Brief*. New York: The Alan Guttmacher Institute, 1997.
3. *The World's Youth 1996*. Chart. Washington: Population Reference Bureau, 1996.



# Gender Norms Affect Adolescents

Gender perspectives in education, services and training can lead to better reproductive health for youth.

In an effort to improve the reproductive health of adolescents and young adults, many organizations that work with youth are incorporating a gender perspective into sex education, service delivery and provider training programs.

“Gender” is a term that can be used to categorize the different roles of men and women, as determined by the society in which they live. While a person’s sex — the biological distinction of being male or female — determines reproductive health status and reproductive health needs, gender perspectives also play a role. Sociocultural factors that influence adolescents’ views on sexuality, their access to information, and their access to health services affect reproductive health and well-being, including teenagers’ ability to protect themselves from unplanned pregnancy or STDs.

“A child’s sex is determined before birth, but gender is learned,” says Dr. Karen Hardee, an FHI principal research scientist. “Throughout childhood, boys and girls receive different messages about behaviors that are expected of them — messages from parents, society, peers, the media — messages that some behaviors are acceptable for boys but not for girls, and vice versa. Health workers must be sensitive to how gender norms affect adolescents’ decision-making about reproductive health behaviors and how these norms affect access to health services.”

“Providers must see reproductive health not only in terms of services but in terms of attitudes and quality of care,” says Naana Otoo-Oyortey, an International

Planned Parenthood Federation technical officer. “Both boys and girls have a right to basic information and access to resources that will enable them to live a satisfying reproductive and sexual life. Providers must recognize that boys have responsibilities that must not be neglected. They must acknowledge that women’s decisions on reproductive matters are directly influenced by their partners, husbands, fathers, etc., and address the need for women to be empowered to make informed decisions.”

Many societies place a higher value on males than females. From infancy, girls may receive less food than boys and less medical attention when sick. For adolescent girls, an unplanned pregnancy can mean expulsion from school and, consequently, limited job opportunities. In at least nine sub-Saharan African countries, girls are temporarily or permanently expelled from school if they become pregnant, but no punitive action is taken against boys who become fathers. In Kenya, some 10,000 girls leave school annually due to an unplanned pregnancy.<sup>1</sup>

Gender norms can place girls at risk of sexual violence, including rape or domestic violence. A recent Demographic and Health Survey in Egypt showed that 86 percent of the more than 2,300 women interviewed believed beatings by husbands are justified under some circumstances; for example, if the woman refuses to have sex or “talks back.” Nearly 31 percent of women reported being beaten during pregnancy. The percentage who believed beatings were justified was higher among women ages 15 to 19 than for other age groups.<sup>2</sup>

For some young women, sexual intercourse is not a matter of choice. A study based on interviews with 128 adolescents in Peru and 108 in Colombia found that 60 percent had been sexually abused within the previous year. Thirty-nine of the women were pregnant as a result.<sup>3</sup> Studies in Botswana and Kenya found that for many adolescent women, first sexual intercourse was forced or coerced.<sup>4</sup> In rural Malawi, 55 percent of 120 adolescents surveyed reported they were often forced to have sex.<sup>5</sup> A study by the Alan Guttmacher Institute found that 60 percent of U.S. adolescent girls who had sex before age 15 did so involuntarily.<sup>6</sup> Boys also may experience forced or coerced sex. In Mwanza, Tanzania, one study among street children found that boys, as well as girls, performed "survival sex" — sex used as a means of bargaining for money, food, or protection from violence.<sup>7</sup>

Female circumcision is another cultural practice based on gender that can jeopardize reproductive health. According to the World Health Organization (WHO), some 2 million girls annually undergo the procedure, which involves partial or total amputation of the clitoris, and in some cases, removal of the labia minora. In some forms of circumcision, the clitoris and labia minora are removed and the labia majora are cut, then stitched together to cover the urethra and the entrance to the vagina. The immediate health risks include infection, pain, and bleeding, which can lead to shock and possibly death. Long-term complications can include prolonged and obstructed labor. There are no health benefits.

#### DIFFERENT VIEWS

Several studies have shown differences in the way girls and boys view their gender roles and the effects on reproductive health.

A survey of more than 100 factory workers in Thailand, ages 15 to 24, found that the majority of men said premarital intercourse was accepted and expected for them, that their first sexual intercourse was with a prostitute, and that boys who had not yet had intercourse were ridiculed by their peers. Young women said premarital intercourse was unacceptable for "respectable" women and could damage the family's reputation. Young men viewed contraception as a woman's responsibility, but young women said they would not consider seeking or requesting contraception because of the fear of being thought of as sexually active.<sup>8</sup>

In Jamaica, a study conducted by FHI's Women's Studies Project among 945 youth, ages 11 to 14, examined sexual knowledge, attitudes and behaviors. More than 63 percent of the boys reported having had sexual

them," only 33 percent of the girls agreed. Approximately 57 percent of boys agreed that if a boy spends money on a girl, she should have sex with him, while only 31 percent of the girls agreed.

In Brazil, researchers at the Universidade de São Paulo interviewed more than 5,000 adolescents, ages 14 to 20, about gender roles as part of a research project to develop AIDS prevention strategies. When girls were asked, "What does being a woman mean to you?" their answers were that women were dedicated to love and homelife, they cried easily, and they did not have sex until they met the "right" man. When boys were asked what it meant to be a man, they replied that men were physically strong, were sexually attracted to women and often thought about sex. Boys also said it was important to be married, to work hard,

SEAN SPRAGUE/IMPACT VISUALS



GENDER NORMS CATEGORIZE THE DIFFERENT ROLES MEN AND WOMEN PLAY, AS DETERMINED BY THE SOCIETY IN WHICH THEY LIVE. YOUNG WOMEN GATHER TOGETHER IN THAILAND.

intercourse, while 6 percent of girls reported having intercourse. However, the differences between the boys' and girls' sexual activity may be less than reported. Boys may have exaggerated their sexual experiences, while girls may have been hesitant to report they had sex, given sociocultural norms.<sup>9</sup> The study also revealed other differences in attitudes between boys and girls. While nearly 70 percent of boys said "if you really love someone, you should have sex with

and to show tenderness toward their wives. Boys divided women into two categories: those they would want to marry and those who were promiscuous and could infect them with STDs.<sup>10</sup>

#### INVOLVING MEN

Because women often lack the ability to control when they have sex and with whom, many programs that incorporate gender

have begun projects that empower girls. These projects, such as Better Life Options administered by the Centre for Development and Population Activities (CEDPA), provide information about sexuality, reproductive health, family planning and communications skills. Some also sponsor education or employment programs designed to give girls options to early marriage. Yet, to be successful, gender programs must include boys, too.

"One of the key things we have learned is that you cannot work with girls alone," says Seema Chauhan of the Better Life Options project, which began by educating girls, then expanded to include boys. "Either you do it jointly or in parallel, but boys have to be addressed as much as girls so that gender aspects of sexuality, reproductive health and male-female relationships can be challenged."

Incorporating gender into reproductive health programs for teens can be an opportunity to develop programs and services for men and boys.

"Men often have been left out of family planning programs," says Dr. Patricia Bailey of FHI, who is coordinating research in Brazil on adolescent pregnancy. "Unfortunately, men's own active involvement in reproductive health programs has been limited to treatment of STDs."

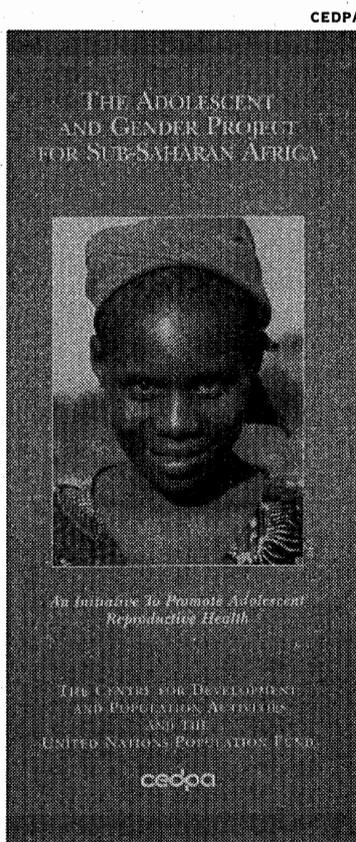
Educating boys that reproductive health is not for women only is one of the goals of the Young Men's Clinic in the United States. Located in an urban neighborhood of New York, the clinic is part of a health facility that provides other services, including pediatric and obstetrical care. Dr. Bruce Armstrong of the clinic says family planning services were rarely being used by men. When health workers asked adolescents why they did not use these services, boys said they were embarrassed, and that it made them "feel not like a man" to visit a clinic that was primarily for women.

The solution was to develop a clinic for men but to provide a variety of health services, including physical exams necessary for work or school and screenings for disease, such as sickle-cell anemia. That way, men could come to the clinic without the fear that friends or neighbors might think they were seeking contraceptives. The clinic also sponsored sports events for men to encourage them to use services.

On average, 30 to 35 men each week visit the men's clinic, which is administered by Columbia Presbyterian Hospital and Columbia University's School of Public

Health. Regardless of the reason for a visit, providers try to educate men about their reproductive health, Dr. Armstrong says. For example, if a man comes in for tuberculosis screening, health workers might ask him about his contraceptive needs and STD risks.

"There are indicators of success of male involvement in reproductive health," Dr. Armstrong says. "One would be using condoms. Others would be talking to your



CEDPA GENDER PROJECT BROCHURE.

partner, initiating the conversation with your girlfriend, bringing home information from our women's clinic, bringing home contraceptive foam, or learning about women's methods."

In another effort to involve men in ways that may lead to better reproductive health, Centro de Educação Sexual (CEDUS) in Rio de Janeiro, Brazil, conducted workshops that challenged gender stereotypes. In one activity, called "Hot Potato," adolescent boys each receive a card with a word associated with either a male or female stereotypical trait, such as "playboy," "faithful," "nurturing."

The boys pass the cards among themselves during a timed interval. When the clock stops, each boy keeps the card he has, then tapes it to his shirt. Then the boys discuss the trait on their card and how they feel about this characteristic. "Values about gender roles — planted in childhood and reinforced in adolescence — should not be seen as something that we can change after brief participation in two or three short educational activities," a CEDUS report says. "Nonetheless, we believe that ... youth can use activities like these to stimulate discussion, reflection, and someday, we hope, attitude and behavior change."<sup>11</sup>

When planning reproductive health programs for adolescent boys, experts say programs should offer information on men's health, including the risk of STDs; information about women's bodies and their reproductive health concerns; access to contraceptives and STD services (or referrals); and education to help boys improve their communication skills. Health programs can make reproductive health services more "male-friendly" by offering services in a separate room or at different hours from those offered for women.

"Building a separate infrastructure to deliver male services is unnecessary," says one report from the United Nations Population Fund (UNFPA). "Men's services can be provided by special hours or minor adaptations to existing facilities, such as establishing a separate waiting area."<sup>12</sup>

In addition to improving their own health, involvement of men in reproductive health programs can indirectly improve the health of women, whose access to health services is often controlled by fathers, husbands or sexual partners. "The term gender can serve as a significant reminder that men play important roles in women's reproductive health," says FHI's Dr. Bailey.

## INCORPORATING GENDER INTO PROGRAMS

Several health projects have incorporated gender into their education and services. Others are examining ways in which gender affects adolescents' health.

In Argentina, the Foundation for Study and Research on Women in Buenos Aires offers education sessions on family planning and STDs to secondary school students. Some 50 to 100 students attend each

program, then break into small groups to discuss a variety of reproductive health topics, including gender roles.

"We try to make them think about the roles men and women have in society," says Dr. Laura Pagani, an obstetrician-gynecologist, who is working at the Foundation for Study and Research on Women to develop a plan for incorporating gender into reproductive health programs. "We ask, 'How would you feel if you were pregnant? Who would you consult for advice?' We ask the girls, but we also ask the boys, 'How would you feel if this were happening to you?'"

In Gujarat, India, the Centre for Health Education, Training and Nutrition Awareness (CHETNA) incorporates gender into its *melas*, health education workshops for young people ages 11 to 18. Held in schools or other large facilities, the three-day *melas* feature information booths containing health materials and education sessions on different aspects of reproductive health, including menstruation, STDs and contraception. The *melas* also include a component that examines gender roles. Dramatic skits are held to illustrate gender stereotypes, and there are discussions among participants about different expectations for boys and girls. For instance, rural participants said when girls come home from school, they are expected to help with the cooking, while boys are allowed to play. To reinforce the message that gender roles can change over time and vary among cultures, workshop facilitators try to take on roles not typically associated with their gender. For example, women use video cameras to tape the sessions, and men sweep the floors.<sup>13</sup>

One checklist for incorporation of gender issues into health programs asks providers to consider these questions: How are girls treated differently from boys within the health care project? What constraints are there on women's or girls' time that might prevent them from seeking health services? Does the project place the responsibility for improved health solely on women, or are men involved too? What impact does the project have on the relationships between men and women?<sup>14</sup>

A draft paper prepared by the Population Council lists several steps health workers can take to incorporate gender into reproductive health programs. They include: developing sex education programs

that address the specific needs of girls; educating young women about their bodies and fertility cycles; encouraging males of all ages to become involved in reproductive health education programs and services; and providing boys with information about male and female sexuality and opportunities to discuss sexuality.<sup>15</sup>

Training is important. Health workers must be aware of their own views of gender relationships and how that may affect the services they provide. "Reproductive health is not just providing technical information," says Seema Chauhan of CEDPA. "It's understanding the dynamics between young girls and boys. Often service providers aren't trained to deal with their own biases."

In developing reproductive health programs for adolescents, providers should take into account both practical and strategic needs, explains Susan Pfannenschmidt, an FHI research analyst and one of the authors of a report on incorporating gender into development programs. A practical need might be teaching young adults about condom use and communications skills. A strategic element might seek to bring about more equality in gender roles in future; for example, a program that would offer young boys classes in child care. "Ideally, a program should do both," Pfannenschmidt says.

Providers who consider gender relations and the reasons for behavior when they develop adolescent services may find that, in the long-term, programs are more effective, says Martine de Schutter, program advisor on women's health and development at the Pan American Health Organization.

"Becoming pregnant isn't always from a lack of information," de Schutter says. "It can be determined by what the expectations are for girls and boys."

"Think of gender like putting on new glasses," she says. "You see the same reality, but you focus on it differently. Be sensitive that men and women have different needs and you can make a difference in responding to their needs ... by improving dialogue between men and women, by improving negotiating skills. There is not a quick recipe to add gender. The main thing is to be sensitive that not only biology impacts on health, there are social issues as well."

— Barbara Barnett

## REFERENCES

1. Ngwana A, Akwi-Ogojo A. *Adolescent Reproductive Health Rights in Sub-Saharan Africa*. Washington: CEDPA, 1996.
2. El-Zanty F, Hussein EM, Shawky GA. *Demographic and Health Survey 1995 Egypt*. Calverton, MD: National Population Council and Macro International Inc., 1996.
3. Stewart L, Sebastiani A, Delgado G, et al. Consequences of sexual abuse of adolescents. *Repro Health Matters* 1996;7:129-34.
4. Okumu MI, Chege IN. Female adolescent health and sexuality in Kenyan secondary schools: a survey report. Unpublished paper, 1994. African Medical and Research Foundation. WHO Botswana YMCA and WHO/GPA joint research project on assessment of peer education: final report on the baseline assessment findings. Gaborone: World Health Organization, 1992.
5. Helitzer-Allen D. *An Investigation of Community-based Communication Networks of Adolescent Girls in Rural Malawi for HIV/STD/AIDS Prevention Messages. Report in Brief*. Washington: International Center for Research on Women, 1993.
6. *Sex and American Teenagers*. New York: Alan Guttmacher Institute, 1994.
7. Ranjani R, Kudrati M. The varieties of sexual experience of the street children of Mwanza, Tanzania. In: *Learning About Sexuality: A Practical Beginning*. Eds. Zeidenstein S, Moore K. New York: The Population Council and the International Women's Health Coalition, 1996.
8. Ford NJ, Kittisuksathit S. Destinations unknown: the gender construction and changing nature of the sexual expressions of Thai youth. *AIDS Care* 1994;6(5):517-31.
9. Eggleston E, Jackson J, Hardee K, et al. Sexual activity and family planning: behavior attitudes and knowledge among young adolescents in Jamaica. Paper presented at the Population Association of America annual meeting. New Orleans, May 8-11, 1996.
10. Paira V. Sexuality, condom use and gender norms among Brazilian teenagers. *Reprod Health Matters* 1993;2:98-109.
11. Barker G, Loewenstein I. *Where the Boys Are: Promoting Greater Male Involvement in Sexuality Education: Conclusions from Qualitative Research in Rio de Janeiro, Brazil*. Rio de Janeiro: CEDUS, 1996.
12. Green GP, Cohen SI, Ghouayel H B-E. *Male Involvement in Reproductive Health, Including Family Planning and Sexual Health. UNFPA Technical Report 28*. New York: UNFPA, 1995.
13. Capoor I, Mehta S. Talking about love and sex in adolescent health fairs in India. *Reprod Health Matters* 1995;5:22-27.
14. Mosse JC. Gender and health: comments arising from NGO proposals and reports. Paper prepared for the JFS/NGO workshop on gender and development, July 1993.
15. Population Council. Family planning and gender issues among adolescents. Unpublished paper. The Population Council, 1994.



# Education Protects Health, Delays Sex

Sex education helps youth clarify their values, avoid risky behaviors and improve negotiation skills.

**M**any youth who become sexually active do so without accurate information about reproductive health. This lack of information can put them at risk of unplanned pregnancy or sexually transmitted diseases (STDs). Sexual health education can be one means of helping young people prevent these problems and improve their future reproductive health.

Several studies have shown that sex education can help delay first intercourse for adolescents who are not sexually active. For teenagers already sexually active, including those who are married, sex education can encourage correct and consistent use of contraception or STD protection. Fears that sex education programs encourage or increase sexual activity appear to be unfounded, research suggests.

The most effective sexual health programs are those that include more than information on reproductive health. These programs also help youth to enhance communication and negotiation skills, clarify their values, and change risky behaviors.

“Basic information on reproductive health is important for youth — just as basic information about other types of health issues is important,” says Dr. Cynthia Waszak, an FHI researcher who is an expert on adolescent health. “Sex education programs may be the only place that young people can learn accurate information about reproductive health. Sex education pro-

grams may offer the only setting in which young people can practice the skills necessary to maintain good reproductive health.”

## LACK OF KNOWLEDGE

Misinformation and misunderstandings about conception, family planning and STD risks abound among young adults. In Jamaica, research conducted by the University of the West Indies and FHI's Women's Studies Project found that one group of adolescents had little accurate information about reproductive health issues. The study surveyed about 500 students, ages 11 to 14, as they began an in-school family life education program designed to delay first pregnancy. Students in this group were considered to be at high-risk for early sexual activity.

Although 52 percent of girls and 77 percent of boys knew that condoms could protect against STDs, only 4 percent of girls and 10 percent of boys knew that conception is most likely to occur during the mid-point of a woman's menstrual cycle. Only 27 percent of girls and 32 percent of boys knew it was possible to become pregnant during first intercourse, and approximately 15 percent of girls and boys thought oral contraceptives protected against STDs. Students will be surveyed twice more, at completion of family life education and a year later, to learn how this program affects their knowledge, attitudes and behaviors.<sup>1</sup>

Studies of young people in other regions have shown a similar lack of accurate information. In India, of 100 girls who came to a hospital seeking abortion, 80 percent did not know that sexual intercourse could lead to pregnancy or STDs, and 90 percent did not know about contraception.<sup>2</sup>

A study of Russian adolescents' knowledge of AIDS found that, among 370 high school students surveyed, only 25 percent of the girls and 35 percent of the boys knew that condoms should be used just once. Thirty-eight percent of students incorrectly believed that condoms could be washed and used several times.<sup>3</sup> In Chile, where 948 public school students were surveyed in Santiago's poorer communities, 57 percent of boys and 59 percent of girls said condoms could be re-used. Sixty-seven percent did not know the fertile or infertile times of a woman's menstrual cycle.<sup>4</sup>

Lack of information may be one reason that adolescents' use of family planning methods is generally low. In South America, for example, only 43 percent of young married women, ages 15 to 19, are using contraception, according to data compiled by the Population Reference Bureau (PRB). Among unmarried sexually active women, 29 percent use contraception. In western Africa, 5 percent of married teens use a family planning method, compared with 34 percent of sexually active unmarried teens. In southeast Asia, 36 percent of married youth use contraception, compared with 28 percent of unmarried adolescents.<sup>5</sup>

#### EVALUATING SEX EDUCATION

Evaluating the impact of sex education programs on adolescent knowledge and behavior has been problematic. Programs vary in content, making comparisons difficult. In addition, the personal nature of the questions may make young people reluctant to answer truthfully, and researchers find it hard to isolate the effects of sex education programs from those of other sources of information, such as mass media or parents.

However, evaluations that have been done among young adults in both developing and industrialized countries show that formal sex education programs can increase knowledge of reproductive health and can improve the use of methods to protect against pregnancy and STDs.

A study in Banjul, The Gambia, found that knowledge about contraception was greater for adolescent students who had attended family life education (FLE) programs than for those who did not. Additionally, contraceptive use at first intercourse was higher among females who attended FLE programs.<sup>6</sup>

In Tanzania, a school-based program for young people ages 13 to 15 showed an increase in knowledge about AIDS and a decrease in the number of students who planned to have sex in the near future.<sup>7</sup>

A retrospective study of 8,450 women in the United States, ages 15 to 44, examined the relationship between sex education and use of contraception at first intercourse. Women who received formal instruction on contraceptive use before their first sexual intercourse were more likely to use a method. Women were less likely to use a method if they received information on contraception the same year they began sexual activity.<sup>8</sup> A survey, conducted among 1,800 15- to 19-year-old males in the United States, found that among those who had received formal education about AIDS and family planning, there was a decrease in number of sexual partners and an increase in consistent use of condoms.<sup>9</sup>

The World Health Organization (WHO) recently published a review of 1,050 scientific articles on sex education programs. Researchers found "no support for the contention that sex education encourages sexual experimentation or increased activity. If any effect is observed, almost without exception, it is in the direction of postponed initiation of sexual intercourse and/or effective use of contraception." Failure to provide appropriate and timely information "misses the opportunity of reducing the unwanted

outcomes of unintended pregnancy and transmission of STDs, and is, therefore, in the disservice of our youth," the report says.<sup>10</sup>

Young people need two types of messages in sex education programs, the WHO report said: messages for those who have not begun sexual activity and messages for those who are already sexually active. Also, because some young people begin having sex as early as age 12, the report recommended that formal sex education programs begin well before this age. While the goal of many sex education programs is to reduce the incidence of unplanned pregnancy, WHO recommends that programs also consider ways to reduce the incidence of unprotected in-



DRAWING FROM A CALENDAR PROMOTES ABSTINENCE.

tercourse, since teens who experience unprotected intercourse are vulnerable to STDs as well as unplanned pregnancies.

While some studies have found benefits of sex education programs, others have shown negligible results. A study in St. Kitts-Nevis, in the eastern Caribbean, compared students who took sex education courses and those who did not. The course, which was held twice weekly for 26 weeks, included information on reproduction and

*Continued on page 18*

Good counseling helps sexually active young adults choose the most appropriate contraceptive method. While no biomedical reasons exist to deny any contraceptive method based on young age alone, other factors may be important to consider. Providers should be aware of social and cultural barriers, and listen carefully to their clients. Some

### Barrier Methods

Barrier methods are particularly appropriate for young people. Compared to other methods, they are usually accessible, available and affordable. Youth can provide condoms directly to other youth, and condoms are readily available without prescription. They are effective immediately, are user-controlled and can be easily initiated and discontinued — all advantages for youth.

Because barrier methods must be used correctly during every intercourse to be effective, counseling is needed for young adults to be successful users of these methods.

Using barrier methods also presents challenges for youth. Condoms in particular require partner participation and communication, difficult skills for most youth. Nevertheless, with counseling and training, condom use can encourage sexually active youth to talk about shared sexual responsibility, thus establishing patterns that may last into adulthood.

Barrier methods include the male condom and female-controlled methods — spermicides, the female condom, diaphragm and cervical cap. The methods can be used alone, in combination, or with non-barrier types of contraception. All barrier methods are safe, have no systemic effects, and are relatively effective for preventing pregnancy. Some offer varying degrees of protection from STDs when used consistently and correctly. Only the diaphragm and cervical cap, which are not widely available in developing countries, require a clinic visit for proper fitting.

Latex condoms provide the best protection against STDs, including AIDS. Young people are particularly vulnerable to STDs because their sexual partners change more frequently than older adults, and some young adults have multiple partners. Also, young women are biologically more vulnerable to infections such as chlamydia because the exposed surface of the cervix is thinner than in older women.

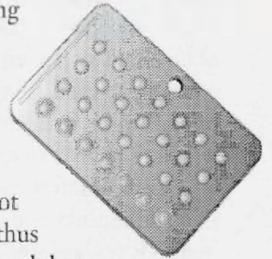


### Oral Contraceptives

Counseling about correct pill-taking is particularly important for young adults. The contraceptive effect of the pill wears off quickly once it is discontinued. This can be a problem for young women who may stop taking the pill when they break up with boyfriends, since they may resume the relationship or begin another and have intercourse before resuming pill use. Also, some youth may be less consistent pill users than older adults. Providers should encourage young women to link pill-taking to some daily routine to ensure correct use.

Pill use is independent of sexual intercourse and can be used without the male partner's knowledge or cooperation. Oral contraceptives (OCs) do not offer any protection against STDs, and thus providers should recommend that young adults at risk of STDs use condoms in addition to using the pill.

Young adults can safely use OCs containing both estrogen and progestin, which are very effective at preventing pregnancy when used consistently and correctly. OCs also provide non-contraceptive health benefits such as regular menses and protection against ectopic pregnancy, ovarian and endometrial cancer, and pelvic inflammatory disease (PID). Progestin-only pills, known as minipills or POPs, are slightly less effective at preventing pregnancy and more likely to cause breakthrough bleeding, compared with combined OCs. For minipills to be effective, they must be taken within three hours of the same time every day, a requirement that may be difficult for most young women.



### Natural Family Planning

Natural family planning methods may be the only options available for some young adults. However, to use periodic abstinence or withdrawal (coitus interruptus) successfully, couples must have a high motivation and self-control, characteristics that are especially difficult for young adults. Also, periodic abstinence requires a thorough knowledge of the menstrual cycle, which many young adults do not have.

In the months immediately after menarche, the menstrual cycle is not regular, making periodic abstinence difficult to practice. Also, periodic abstinence and withdrawal have very high pregnancy rates compared to other methods of contraception, and neither protects against STDs.

### Sterilization

Sterilization is generally not an appropriate method for young adults since they are at the beginning of their reproductive years. Studies show that regret about having been sterilized is often associated with undergoing the procedure at a young age.<sup>1</sup> Hence, it is extremely important for any young adult contemplating sterilization to know that this is a permanent procedure that should be considered irreversible. Reversibility is possible but is not always successful, and such services are not available in many locations.

There is a high probability that young adults, especially those without children, may experience changes in their lives and later desire to have children. Having received all of this information in counseling, a client also has

## S FOR YOUNG ADULTS

Young adults, especially unmarried youth, are often embarrassed when seeking information. Counseling needs to include basic information on sexuality and the menstrual cycle, peer pressure, communication difficulties and sexual inexperience.

### Injectables and Implants

Injectables are popular among many youth because they require only a periodic visit to a clinic or pharmacy. No supplies need to be kept at home, and a partner would not know a woman was using it. However, the difficulty of visiting the clinic or pharmacy may be a problem for young adults who want to use this method.

These hormonal contraceptives provide excellent protection against pregnancy but do not protect against STDs. They are safe for young people and, like the pill, have long-term, non-contraceptive benefits, including decreased risk of PID, ectopic pregnancy, and ovarian and endometrial cancers. Unlike pills, however, injectables and implants do not require a woman to take daily action, which make them easier to use for most young people. Two widely-used progestin-only injectables are available: DMPA (depot-medroxyprogesterone acetate), taken every three months; and NET-EN (norethisterone enanthate), taken every two months.

A progestin-only implant, Norplant, is effective for up to five years and is a good method for young women who know they do not want children for several years. Norplant requires a simple surgical procedure for insertion and removal.

These methods often result in irregular bleeding, spotting or amenorrhea, which may be of concern to some women. They often result in a delay in return to fertility, which could be important to young adults.

Theoretical concerns have been raised regarding use of progestin-only methods and bone density in women under age 16. Preliminary evidence suggests that long-term DMPA use may be associated with reduced bone density, but that this effect may be reversible after DMPA use is stopped.<sup>1</sup> Adolescence is a time of rapid development in bone density and length. DMPA has been shown to lower estrogen levels, and estrogen is needed for developing and maintaining strong bones. Hence, using these methods could potentially predispose these women to osteoporosis in later life, but definitive studies have not been completed.

1. Cundy T, Evans M, Roberts H, et al. Bone density in women receiving depot medroxyprogesterone acetate for contraception. *Br Med J* 1991;303:13-16; Cundy T, Cornish J, Evans MC, et al. Recovery of bone density in women who stop using medroxyprogesterone acetate. *Br Med J* 1993;308:247-48.



the right to know there is no medical reason to deny this very effective method to a young adult based on age alone.

1. Wilcox LS, Chu SY, Eaker ED, et al. Risk factors for regret after sterilization: five years of follow-up in a prospective study. *Fertil Steril* 1991;55:927-33.

### Abstinence

Abstinence is the most certain way to prevent pregnancy and the transmission of STDs. It should be discussed as an option for young adults who have not initiated sexual intercourse and for those who have already begun sexual activity. Abstinence requires commitment, high motivation and self-control, making it difficult for many young adults to achieve.

Counseling should focus on gaining skills to cope with peer and partner pressure. Youth need to understand that sex is just one of many ways of expressing love and affection. Also, providers should ensure that youth have information and access to contraceptive options.

### Intrauterine Devices (IUDs)

With careful screening, IUDs may be safely used by young women in stable, mutually monogamous relationships. For these women, it is important to counsel them to check for the IUD string regularly, to ensure the IUD has not been expelled. Women under age 20 who have not borne children may have an increased risk of expulsions and complications with IUD use.

Screening for STDs is particularly important. IUDs are not recommended for women at an increased risk of STDs. If a woman has had an STD in the last three months, she should not get an IUD until successfully treated. The insertion process can increase the risk of infection in the upper genital tract, leading to pelvic inflammatory disease. This in turn can lead to infertility. IUDs are very effective at preventing pregnancy, have few side effects, and are not expensive. IUDs do not protect against STDs.



### Emergency Contraception

For many youth, sex is largely unplanned and sporadic. Yet few youth know about the option of emergency contraception, which uses contraceptives after unprotected intercourse. Emergency contraception is an option when couples forget to use a barrier method or pill, use a method incorrectly, experience condom breakage or slippage, have unplanned sex with no contraceptives available, or if a woman is raped. It is not designed to be used as a regular method.

The most common approach to emergency contraception is to use a regimen of oral contraceptives. Higher doses of pills should be taken, the first within 72 hours after unprotected intercourse and the second dose 12 hours later. The dosage is achieved by taking multiple pills, typically four or two pills depending on the strength. Each dose should contain at least 100 mcg of ethinyl estradiol and 500 mcg of levonorgestrel. Used correctly, emergency contraception prevents about 75 percent of pregnancies that would otherwise occur.

## Education

*Continued from page 15*

contraception, emotional development and sexuality. Students completed a questionnaire on sexual activity and contraceptive use before they took the course, then at the end of the course. Approximately one-third of sexually active students said they used contraception before they began the sex education course, and the percentage changed very little afterward.<sup>11</sup>

Programs that stress abstinence as the only means of preventing STDs and unplanned pregnancy appear to have little effect. One study followed 320 students who participated in a program that recommended abstinence as the only option for unmarried youth. Researchers found an increase in sexual activity among young people enrolled in the program. There was no increase in sexual activity among a group of young people not participating in the abstinence program.<sup>12</sup>

### BEHAVIOR CHANGE

While sex education programs can increase knowledge about reproductive health, knowledge does not always translate into action.

In Uganda, for example; a study of 4,510 young people ages 15 to 24 found that knowledge about condoms was high, and that men and women had a positive attitude about condoms. Yet, while more than three-quarters of young men and women knew that condoms prevent STDs, fewer than 13 percent of males and virtually no females (fewer than 1 percent) said they used condoms.<sup>13</sup> A program in the Philippines, designed to teach AIDS prevention to more than 800 adolescents, did increase knowledge about AIDS. However, the program did not result in changes in condom use, nor was there an increase in the number of students who agreed that young people should delay sexual intercourse until adulthood or marriage.<sup>14</sup>

In examining ways to improve adolescents' reproductive health, experts say that successful sex education programs share some common characteristics. They focus on changing risky behaviors; they reinforce the message that unprotected sex is not desirable and explain ways in which young people can protect themselves; they actively involve students in learning, such as activities that allow students to put a condom on a model or purchase a condom; they help students practice their communications and negotiation skills; they discuss sociocultural pressures on teens to become sexually active; and they provide training for people who will teach sex education.<sup>15</sup>

feeling responsible for their own actions," says Flanagan of AIDSCAP's behavioral change communications unit.

"We adults do not give them a chance to be responsible for very many things," she says. "Young people do not make a decision about whether to go to school — we tell them they must go. Young people do not even make decisions about when to go to bed or when to get up. Suddenly, they are faced with decision-making about sexual issues, and they don't have those skills."

To encourage young people to develop their decision-making skills, AIDSCAP has developed radio and television messages in the Dominican Republic that are aimed at getting young people to delay first inter-

JULIO ETCHART/IMPACT VISUALS



SCHOOL CHILDREN IN SANTOS, BRAZIL LEARN ABOUT CONDOMS AS PART OF THEIR HEALTH EDUCATION.

Changing risky behavior requires more than education; it requires an individual's commitment, says Donna Flanagan of FHI's AIDS Control and Prevention (AIDSCAP) project. A young adult must then acquire the skills necessary to make the change, such as the skill of negotiating condom use. "A lot of what young people need is the experience and the practice of making decisions and

course and to use condoms when they do become sexually active. After providing information on AIDS and STDs, the messages end by saying: "Go talk to your dad about AIDS," or "Go talk to your mother about STDs."

The FOCUS on Young Adults program recently analyzed reproductive health programs in developing countries and found few studies that demonstrate sex education results in behavioral change. Experts say

more research is needed, and evaluation measures need to be refined. However, the FOCUS project says sex education programs that include activities to help young people build skills in communication and negotiation are likely to be more successful than programs that only provide information on reproductive health.

Several family planning programs have incorporated elements of behavior change into sex education programs for young people. One example is the *Planeando tu Vida* (Planning your Life) program in Mexico. The program provides youth with information about pregnancy, disease prevention and STDs, plus information on relationships, decision-making, communications and assertiveness.

Begun by the Instituto Mexicano de Investigación de Familia y Población (IMIFAP), in collaboration with the Mexican government, the program was developed based on research with young people. More than 865 teenage girls, ages 12 to 19, were interviewed, plus 355 teens who had an unplanned pregnancy. The young people's responses became the foundation for *Planeando tu Vida*, which was introduced as a pilot program into Mexico City schools in 1988-89, then expanded.

One study on the program's impact compared three groups of students: adolescents who had not received sex education; those who participated in a sex education program that included information on menstruation, anatomy, physiology, contraception and STDs; and adolescents who participated in the *Planeando tu Vida* program. When interviews with study participants were conducted four months and eight months later, there was no change in initiation of sexual activity among the groups. For those students who were not sexually active when the *Planeando tu Vida* course began, their levels of contraceptive use were higher when they did become sexually active. Another study compared more than 900 students who took the *Planeando tu Vida* course with students who did not. The program had no effect on program participants' sexual activity and no effect on contraceptive use among those who were already sexually active. However, among boys who were not sexually active when the course began, contraceptive use increased when they did become sexually active.<sup>16</sup>

Another example of a sex education program that encourages behavior change is the Centro para Jóvenes (Center for Youth) in Colombia. Established in 1990 by PROFAMILIA, the center offers information and education to adolescents, education for parents and teachers, and reproductive health services.

During the center's first year, staff found that a high percentage of students had received some information on reproduction, but the information did not deter young people from having sex. Many of the girls who came to the center came because they feared they were pregnant. Among the girls who did have unplanned pregnancies, they shared common characteristics — low self-esteem, little or no knowledge of contraception, and poor communication with family members.<sup>17</sup>

PROFAMILIA staff decided to expand the content of its sex education programs, which traditionally had focused on the biological aspects of reproduction, to include information on pregnancy and STD prevention, plus activities designed to promote self-esteem, communication, and decision-making. One of the services PROFAMILIA has begun to offer is a "psychological orientation," or a counseling session in which young people can discuss fears or concerns about sexuality and health.

"Young people need to understand and accept the physical changes, to talk about relationships with adults, to learn decision-making and self-esteem and to develop a general vision of their own sexuality," says German A. Lopez of PROFAMILIA. "That is the purpose of this activity."

Today, PROFAMILIA operates adolescent health centers, which provide education, information and services, in 20 cities in Colombia. Among the information and education programs it provides are annual health fairs for adolescents, which coincide with students' vacations from school. Last year the health fair was held in 15 cities and drew more than 10,000 young people. In addition, PROFAMILIA holds education sessions for parents and teachers, plus workshops that provide 120 hours of training for people who want to become educators in reproductive health programs. While programs have been offered for young people 16 to 19 years old, PROFAMILIA now offers education and services to younger teens, ages 13 to 15.

## WHAT, WHO AND WHERE

In establishing a sexual health education program, providers and policy-makers must consider several questions. What should the curriculum include? Who should be involved in program planning and implementation? And where should services be offered?

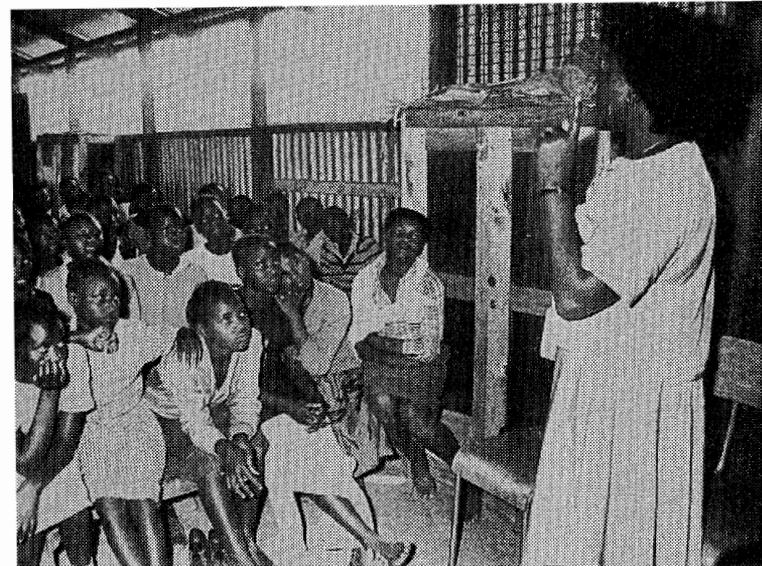
The U.S.-based Sexuality Information and Education Council (SIECUS) recently updated its guidelines for sex education programs. Originally published in 1991, the guidelines were designed to help local communities develop their own curricula or evaluate existing programs. New guidelines include information on contraceptive options that were not available when the first report was published (the female condom, for example).

SIECUS lists six key concepts that should be included in a comprehensive sex education program. These are information about:

- human development, which includes reproductive anatomy and physiology
- relationships, which include relationships with families and friends, as well as relationships in dating and marriage
- personal skills, which include values, decision-making, communication, negotiation
- sexual behavior, which includes abstinence as well as sexuality throughout the life cycle
- sexual health, including contraception, STD and HIV prevention, abortion and sexual abuse
- society and culture, which includes gender roles, sexuality and religion.

According to SIECUS guidelines, sex education should begin in early elementary school, when children are ages five to eight, and continue through adolescence, ages 15 to 18. Courses should be taught only by trained teachers, and community involvement is essential in the development and implementation of the programs. "Parents and other important family members, teachers, administrators, community and religious leaders, and students should all be involved," the SIECUS report says.<sup>18</sup>

SIECUS has worked in Brazil, Nigeria and Russia to help local government and nongovernmental organizations that work with adolescents develop their own guidelines for sex education programs.



FHI AIDSTECH

STUDENTS IN KENYA LISTEN AS A HEALTH WORKER DISCUSSES STDs.

Involving young people in the design and implementation of sex education programs, including planning the content of the curriculum, is an important element in ensuring that the program addresses teens' needs. The Youth for Youth Foundation in Romania, supported by the Centre for Development and Population Activities (CEDPA), began with a survey of students at 17 high schools in Bucharest, to determine young people's knowledge of reproductive health issues and their health needs. Lack of basic information on reproductive health was one of the main reasons for unplanned pregnancies and abortions among Romanian youth. More than one in five young people were sexually active before marriage, researchers found.

Survey results were the basis for a teaching manual, designed to be used by trainers in the Youth for Youth sex education program. The program's curriculum includes information on reproductive biology, STDs, pregnancy and contraception, as well as activities designed to help young people improve skills in communications and decision-making and clarify values. Sex education classes are taught by peer educators in school to students ages 15 to 16. The curriculum is continually revised and updated to reflect students' concerns and evaluations of their knowledge, attitudes and behaviors.

As was true in Romania, involving community members, especially parents and teachers, is critical to implementation of a sex education program. Parents' acceptance

of or resistance to programs can determine whether children will participate. For example, a survey of adolescents in India helped convince parents and community members of the need for a sex education program; the survey revealed that many adolescents were sexually active, contrary to adults' beliefs that they were not.<sup>19</sup>

Additionally, parents and teachers are important sources of information for teens; consequently, they

need accurate information. When asked who was responsible for talking with children about sex, husbands tended to say it was the wife's responsibility, while wives said it was the husband's responsibility, according to a Population Council study among 500 parents in Zaire.<sup>20</sup>

"Involving parents and community leaders and asking them to provide input into the curriculum regarding community norms and needs may reduce opposition to sex education programs, may calm parents' unrealistic fears, and may even enlist adults as partners in their children's education," says Dr. Waszak.

— Barbara Barnett

## REFERENCES

1. Eggleston E, Jackson J, Hardee K, et al. Sexual activity and family planning: behavior, attitudes and knowledge among young adolescents in Jamaica. Paper presented at the Population Association of America annual meeting, New Orleans, May 8-11, 1996.
2. Chhabra S. A step towards helping mothers with unwanted pregnancies. *Indian Journal of Maternal and Child Health* 1992;3(2):41-42.
3. Lunin I, Hall TL, Mandel JS, et al. Adolescent sexuality in Saint Petersburg, Russia. *AIDS* 1995;9(Suppl 1):S53-60.
4. Millan T, Valenzuela S, Vargas NA. Reproductive health in adolescent students: knowledge, attitudes and behavior in both sexes, in a community of Santiago. *Revista Medica de Chile* 1995;123(3): 368-75.
5. *The World's Youth 1996*. Chart. Washington: Population Reference Bureau, 1996.

6. Kane TT, DeBuysscher R, Thomas TT, et al. Sexual activity, family life education and contraceptive practice among young adults in greater Banjul, The Gambia. *Stud Fam Plann* 1993;24(1):50-61.

7. Klepp K-I, Ndeki SS, Seha AM, et al. AIDS education for primary school children in Tanzania: an evaluation study. *AIDS* 1994;8(8):1157-62.

8. Mauldon J, Luker K. The effects of contraception education on method use at first intercourse. *Fam Plann Perspectives* 1996;28(1):19-24.

9. Ku LC, Sonenstein FL, Pleck JH. The association of AIDS education and sex education with sexual behavior and condom use among teenage men. *Fam Plann Perspectives* 1992;24(3):100.

10. Grunseit A, Kippax S. *Effects of Sex Education on Young People's Sexual Behavior*. Report commissioned by the Youth and General Public Unit, Office of Intervention and Development and Support, Global Program on AIDS, WHO. North Ryde: National Centre for HIV Social Research, Macquarie University, Nd.

11. Russell-Brown P, Rice JC, Hector O, et al. The effect of sex education on adolescents in St. Kitts-Nevis. *Boletin de la Oficina Sanitaria PanAmericana* 1992;112(5):413-24.

12. Christopher FS, Roosa MW. An evaluation of an adolescent pregnancy prevention program: Is "just say no" enough? *Family Relations* 1990;39(1):68-72.

13. Agyei WK, Epema EJ, Lubega M. Contraception and prevalence of sexually transmitted diseases among adolescents and young adults in Uganda. *Int J Epidemiol* 1992;21(5):981-88.

14. Aplasca MRA, Siegel D, Mandel JS, et al. Results of a model AIDS prevention program for high school students in the Philippines. *AIDS* 1995;9(Suppl 1):S7-S13.

15. Kirby D. School-based programs to reduce sexual risk-taking behaviors. *J Sch Health* 1992;62(1):280-87.

16. Pick de Weiss S, Andrade-Palos P. Development and longitudinal evaluation of comparative sex education courses. Final Report to USAID. May 1989. Pick de Weiss S, Andrade-Palos P, Townsend J, et al. Evaluation of the effect of a sex education program on knowledge, sexual behavior and contraception in adolescents. *Salud Mental* 1994;17(1):25-31.

17. Lopez GA. A year of work with adolescents. *PROFAMILIA* 1991;7(18):32-34.

18. SIECUS National Guidelines Task Force. *Guidelines for Comprehensive Sexuality Education*. 2nd Edition. New York: SIECUS, 1996.

19. Sharma V, Sharma A. The approach of the letterbox: a model of sex education in a traditional society. *Rev Med Suisse Romande* 1994;114(12):1075-78.

20. Population Council. Need for family life education in Zaire. Africa OR/TA Project Update. 1992.

# Key Factors Help Programs Succeed

Involving young adults during planning and offering better access are ways to improve youth programs.

**H**igh rates of unintended pregnancy and sexually transmitted diseases among young adults reflect an urgent need for better, more effective reproductive health services for youth. But what makes a program successful?

International health experts agree on several key components that contribute to successful reproductive health services for youth. Identifying and understanding the group to be served, involving youth in designing programs, working with community leaders and parents, and finding better ways to make services accessible are commonly cited as important considerations. Evaluation should be built into program design, and program managers should plan for ways to sustain and expand successful services.

"We still have lots of questions, but we can't wait on final answers to act," says Dr. Herbert Friedman, recently retired director of the World Health Organization (WHO) Adolescent Health and Development Programme. "It is an urgent situation for youth. While we need better evaluations of effectiveness and better measurements of intervention approaches, we do know enough to act. But we must make a concerted effort to extend the quality and scope of programming. We are trying to catch up with the growing interest governments have in serving youth."

WHO is coordinating a review with the United Nations Population Fund (UNFPA) and the United Nations Children's Fund

(UNICEF) of key interventions designed to improve adolescent health services, focusing on the effectiveness of these efforts.

A crucial consideration in planning any service for young adults is the very nature of youth themselves. Young adults are typically less informed, experienced or confident about sexual matters. "They are often more vulnerable than other age groups," explains Dr. Cynthia Waszak of FHI, whose specialty is adolescent reproductive health. "Also, providers tend to be more judgmental of youth, and there are more legal and cultural barriers."

Better ways to make services more accessible, for example, involve the attitude and training of providers, the logistics of clinic location and service, questions of privacy and confidentiality, and other issues that will address the unique needs of young adults. "Young people need advocates. And, providers need special training to serve youth," says Dr. Waszak.

## THE GROUP TO BE SERVED

Successful programs typically identify a specific target group to be served, often defined by age, school status, marital status and other social factors. This helps in analyzing the needs of the target group and in developing appropriate strategies to meet those needs. "It is important to avoid treating adolescents as a homogeneous group," explains Judith Senderowitz, an independent consultant who has analyzed youth programs for

the U.S.-based FOCUS on Young Adults program, UNFPA and others. "Focusing on specific characteristics is extremely important — especially marital status, school enrollment and geographical location." For example, she says, the reproductive health needs of urban and rural youth are usually very different, as are the available resources to serve them.

In a recent evaluation of 70 projects focusing on adolescents, UNFPA found that almost none of the projects had defined its target population clearly or incorporated a needs assessment into the program designs.<sup>1</sup> "Program planners were not always clear about the age range they intended to serve," says Senderowitz, who wrote the UNFPA evaluation. "In some cases, they chose the least costly channel such as in-school programs, even though the most needy and underserved are out-of-school youth."

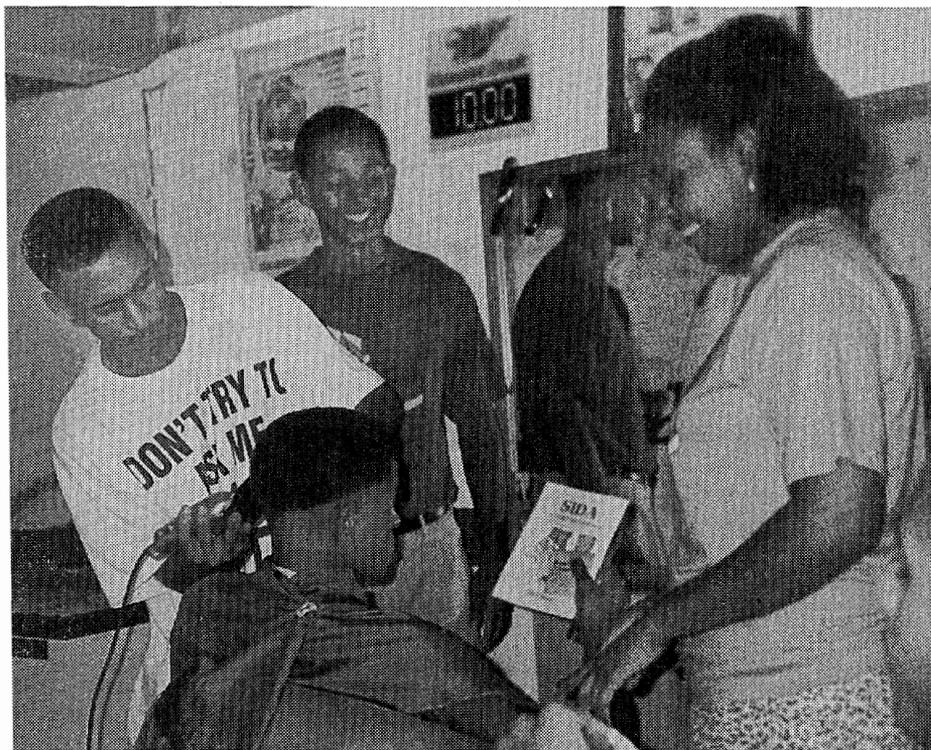
Whether married or unmarried, young people face health risks from pregnancy and sexually transmitted diseases (STDs). But youth who are unmarried often face more obstacles to services and have different contraceptive needs.

"In designing a program for a particular group, it is essential to use specific and measurable objectives," says Dr. Waszak of FHI. "Too often, the goals of a project are not clear. Then, we have no way of judging whether an approach is effective or not."

## INVOLVING YOUTH

Experts agree that providers should involve youth in planning and implementing reproductive health services, and evaluating programs. However, little research has been done to clarify exactly how this involvement can be used to achieve successful results.

CASCO



INVOLVING YOUTH TO HELP EDUCATE OTHER YOUTH, CALLED PEER EDUCATION, CAN BE EFFECTIVE. A PEER EDUCATOR IN THE DOMINICAN REPUBLIC DISTRIBUTES AIDS PAMPHLETS AT A BARBER SHOP.

Marital status can be particularly important to consider. Both married and unmarried youth have common biological and developmental issues regarding reproductive health. Thus, the need for information about sexuality, contraceptives, pregnancy and other issues are similar for all youth.

"Involving youth has gotten to be a fad," says Dr. Ann McCauley, dissemination advisor for FOCUS. "There is no evidence that it is a more effective way to change behavior.

I believe in the concept and support it, but we need to get a lot smarter about what is feasible and how best to include youth."

Providers can involve youth in many stages of a project, from the initial needs assessment and program design to implementation and even training of providers. "It is important to work with youth in focus groups and workshops to identify the main problems or constraints that they have had in trying to get reproductive health information and services," explains Dr. Fritz Moïse, director of the Fondation de Santé Reproductive et d' Education Familiale (FOSREF) in Haiti, which delivers reproductive health services and focuses on youth.

In February, Dr. Moïse helped conduct a training program for providers on access to reproductive health services for youth. Sponsored by FHI in Dakar, Senegal, the workshop participants included both providers and young adults. The youth participated in role plays, practice sessions on counseling and general discussions. In the evaluations of the workshop, several participants mentioned the importance of involving youth. "We learned a lot from the adolescents. Their participation made the workshop more fruitful," wrote one participant, a provider. "I liked the young people's participation a lot. It was good to be able to ask them questions," said another. Asking young people to talk openly about their problems will help improve services, offered a third.

Many programs rely on young adults working directly with other youth. Called peer educators or promoters, these youth have been used effectively in AIDS prevention projects. The FHI AIDS Control and Prevention (AIDSCAP) Project recently reviewed 21 peer education projects in Africa, Asia and Latin America. The study found that peer education is a useful way to provide HIV/AIDS information. "The peer educators speak frankly. They get right to the point without prejudice," said one Brazilian youth interviewed in the study. "They understand me easily as well as my problems on this issue," is how a Cameroon youth put it. However, the report also found that programs may need to do more. "Planners need to consider how and if their projects should evolve," the report concluded. "If peers are already knowledgeable about STD/HIV infection, then peer educators should address the skills and attitudes necessary for behavior change and maintenance."<sup>2</sup>

Based on that study, AIDSCAP produced a guide for developing peer education projects, using a practical, hands-on approach. For example, one section titled "Should I use a peer education approach?" includes a simple worksheet with questions such as: What are the goals of this project, who is the target audience, how many staff members will be needed to help train and supervise the required number of peer educators, and does my budget include supervision expenses?<sup>3</sup>

FOCUS has identified 11 elements in successful peer programs, including selection and training, skills building, effective provision of information and referrals, and finding ways to minimize turnover. When possible, youth should be involved in developing materials, including design, types of language, and field tests, depending upon local circumstances.

#### COMMUNITY INVOLVEMENT

When designing programs to reach youth, policy-makers and providers need to acknowledge the importance of culture and tradition when advocating what young people need. Involving community leaders, parents, teachers and others helps to achieve this difficult balance.

"We need to pay more attention to what works in society in general, not just in programs for youth," says Dr. Friedman of WHO. "Adolescents tend to believe what their parents do, but too often interventions tend to pull apart the parents and youth. We push sex education projects without involving the parents, and they react with horror. People promoting health need to pay attention to the values of society."

The UNFPA analysis found that most projects did not involve parents, community and religious groups, and others whose support would be important for project acceptance. Lack of contact with parents and other invested community groups misses an opportunity both to educate them about the project and to gain their support, the UNFPA report explains. On the other hand, trying to please everybody can delay or block new services, cautions Senderowitz, who adds that "a good strategic approach is to get a few leaders really supportive of your program, who can then lead the way for other community involvement." The UNFPA report points to several effective examples, including projects in Jamaica and

Antigua that sought the help of parents and churches in providing information and guidance to young people.

Sex education programs can be particularly divisive. "Some parents are afraid that their children are being told things that will encourage them to have sex," says Dr. Waszak of FHI. "But parents generally just want what's best for their children. Parents are not necessarily bad people for resisting programs, nor are the kids bad for wanting information. We've got to be more open and understanding of all points of view, while pushing ahead with providing youth the services they need." Research has shown that sex education programs are more effective in changing behaviors when messages reach youth before they become sexually active (see article on page 14).

Several programs have successfully invested time and resources in involving parents. In Zimbabwe, the National Family Planning Council offered a program to help parents educate their children about sexuality and reproductive health. In Tanzania, a parents' organization developed a manual designed to help parents communicate with their children.

#### ACCESSIBLE SERVICES

Experts generally agree that a "youth-friendly" environment can help attract and serve youth who may be embarrassed or intimidated to seek services, or may have practical obstacles such as lack of transportation and funds.

No program can solve all the problems of accessibility, and solutions may vary, even in the same country. For example, should a clinic offer separate services for youth? How youth in a specific target group would respond to this should be taken into account. "It has proven a good strategy for us to organize focus groups with young people to help determine the site and location of the clinic centers," says Dr. Moïse of FOSREF, whose clinics have separate resource centers for youth.

One challenging issue is the attitude of providers, who are often judgmental about unmarried young women seeking services. Studies in South Africa and Senegal, for example, tracked the experience of "mystery clients," youth hired to seek services at clinics. In South Africa, providers resisted requests for condoms and gave no instructions

J. MOHR/WHO



YOUNG ADULTS SOCIALIZE AT A PARK IN THE PHILIPPINES.

for use.<sup>4</sup> In Senegal, none of the youth who requested a contraceptive method received it.<sup>5</sup>

"Providers, who are mostly adults, may have personal or religious views about sexuality that influence how they assist youth," explains Dr. Jose de Codes of FOCUS, who for many years trained providers for WHO and other organizations. "Most providers have difficulty seeing the situation from the point of view of the young person. So adolescents often hesitate to tell adults that they are sexually active and to talk about contraception."

The convenience of location, clinic hours, degree of confidentiality, and style of service can all be important, as can offering referrals to other services. In the recent Senegal workshop, providers and youth developed plans that included ways to link services with youth clubs, reorganizing clinic schedules to serve youth better, and training staff in youth counseling.

## EVALUATION

To determine if a project is accomplishing its goals, providers must rely on more than intuition. "Program managers and staff alike are often skeptical of how money and valuable staff time spent on an evaluation activity can enhance their work," reports Dr. Catharine McKaig of FOCUS in a summary of evaluation approaches. Also, negative results might not please donors, jeopardizing future funds. "While these are legitimate concerns, a simple evaluation can be conducted that can help improve program operations, increase efficiency and effectively help meet program objectives."<sup>6</sup>

The most basic evaluation tool is simple observation. Program managers can ask themselves if the program is going the way they intended. "At a youth center in Kenya, there were no girls," recalls Senderowitz. "To begin with, they simply needed to go and ask the girls why they weren't coming. It was a common sense evaluation tool to use to attract the target group." A group can at least set identifiable and measurable goals to help monitor if it is meeting those goals.

For a more formal evaluation, a program needs to gather information at the beginning of a project, called "baseline data," to compare with data collected later. The comparison can be used to track service delivery, provide information on program participants and describe delivery systems. Called a "process evaluation," it can determine whether services are reaching the intended population, are being delivered as planned and are adequately funded. This approach is often used during a project, perhaps at a midpoint, to help a project adjust its goals and workplan.

In 1992, for example, CARE International started an AIDS prevention project in Kenya called CRUSH (Community Resources for Under 18's on STDs and HIV).

CRUSH relied primarily on training peer educators through lectures. A midterm evaluation found that the approach was not motivating the target group, which itself was too broad and not clearly defined. The project shifted its approach to improve training for peer educators and to focus on out-of-school youth, ages 12 to 18.

At its conclusion, the CRUSH project used an "outcome" evaluation, which seeks to determine how well the project met its goals. This usually involves a sampling process for a survey to help determine if the project changed people's knowledge, attitudes or behaviors. Some experts think that in order to measure behavior change, follow-up surveys need to be done one to three years after the program begins. Such a time span requires a long-term follow-up of participants and consideration of developmental changes and behavioral influences other than the intervention. In the Kenya project, the final evaluation included interviews, a survey of the target population and a control group, and baseline data for comparison. It found that the target audience had more knowledge and showed more signs of positive behavior change than did the control group. It did not compare the rate of STDs among the groups, however.

The EVALUATION Project of the U.S.-based Carolina Population Center recently identified 10 key indicators for an adolescent reproductive health project. These include information that is not too difficult to obtain, such as the total number of contacts with adolescents and the existence of government laws and programs favorable to adolescent reproductive health. It also includes items that would require more ambitious surveys and data collection. The report includes 41 other indicators to consider.<sup>7</sup>

## SUSTAINING GOOD PROGRAMS

Many reproductive health services for young adults begin as small pilot projects that become models for expanding services. Some successful pilot projects, however, die for lack of funding or because their innovative approaches are not replicated by established providers and organizations.

Experts agree that sustaining and expanding good services is important, and should be considered during planning. One example of a small project that moved to a broader scale is a project in Mexico City, Centro de Orientación para Adolescentes (CORA). Begun in 1978, CORA has tried many different approaches, using evaluations to modify programs that were not achieving their goals. It has worked to expand innovative programs into existing institutions, to broaden the use of limited resources. For example, teenage mothers in hospitals needed better counseling and related services. CORA did not have the resources to provide the services on a large scale but served as a catalyst for introducing the services.

"We developed materials and a training system for those working with teenage mothers at a major hospital," explains Dr. Anameli Monroy, who started CORA and is now a consultant to international organizations on youth issues. "We did not have to sustain the project ourselves because we got it integrated into the hospital. So it was not expensive, in terms of new staff or resources for CORA. It meant finding an existing organization that could keep this work going and persuading them to let us do the initial training."

— William R. Finger

## REFERENCES

1. Senderowitz J. Thematic evaluation on adolescent reproductive health — global report submitted to UNFPA. Unpublished report. UNFPA, 1996.
2. Flanagan D, Williams C, Mahler H. *Peer Education in Projects Supported by AIDSCAP*. (Arlington: Family Health International, 1996) 5,14.
3. *How to Create an Effective Peer Education Project*. (Arlington: Family Health International, 1996) 9-12.
4. Abdool Karim Q, Preston-Whyte E, Abdool Karim SS. Teenagers seeking condoms at family planning services: part I. A user's perspective. *S Afr Med J* 1992;82:356-59.
5. Nare C, Katz K, Tolley E. Measuring access to family planning education and services for young adults in Dakar, Senegal. Unpublished paper. Family Health International, 1996.
6. McKaig C. Evaluation of youth programs: identifying effective strategies for promoting the health of young people. *Passages* 1997;15(1):1.
7. Stewart L, Eckert E, eds. *Indicators for Reproductive Health Program Evaluation: Final Report of the Subcommittee on Adolescents*. Chapel Hill, NC: The EVALUATION Project, 1995.



# Pressures Influence Contraceptive Use

Understanding psychological and social pressures young adults face helps programs be more effective.

All too often, health-care providers overlook the psychological and social characteristics of their clients. For young adults, addressing such concerns can be crucial. Understanding the psychological and social influences that bring adolescents to clinics can be especially useful and effective in serving this age group.

Some problems young adults face are psychological. Many adolescents are afraid, embarrassed or unwilling to take the precautions against sexually transmitted diseases (STDs) or to prevent an unintended pregnancy. For example, some adolescents may have multiple partners, yet rarely use condoms. These young adults may be prone to such risk-taking because they do not yet have a mature sense of the hazards involved or an appreciation for the long-term implications.

Pressures from society also affect adolescents and their reproductive health. Cultural expectations, such as a prime value on marriage and motherhood, may encourage girls to bear children at an early age or to begin sexual activity at a young age, exposing them to unintended pregnancy. Traditions of polygamy or sex with older partners in some African countries can increase the risk young women face of contracting HIV or other STDs. Poverty may lead boys or girls into prostitution for money to buy food. Social taboos on discussing sexuality or teaching children about reproductive

health issues can leave many adolescents poorly prepared to protect themselves against STDs or unintended pregnancy.<sup>1</sup>

## SELF-ESTEEM

Few studies have examined how psychological and social values affect adolescents and their reproductive health, and some public health policy-makers may question whether notions of "self-esteem" and "self-confidence" are even relevant in developing countries. Yet feelings of insecurity, fear and self-doubt can interfere with good reproductive health behavior in any culture, says Dr. Cynthia Waszak, an FHI research scientist who specializes in adolescent health. Without confidence, young adults may not seek reproductive health services, or be capable of saying "no" to unwanted sex.

"Yes, there are differences in how people see themselves as part of a community, depending on the country and culture," she says. "But I cannot think of a culture where feeling good about yourself is not important. People still have feelings about themselves, and perceptions about whether they like themselves that determine how they are going to behave, no matter where they are. Self-esteem is a relevant concept everywhere."

Dr. Bené Madunagu of Girls' Power Initiative in Nigeria, echoes this view. "If young women do not believe in themselves, and they do not believe they have the capacity to address reproductive rights at all, then

they will be unable to assert their rights in [high-risk] situations," says Dr. Madunagu, whose program offers an after-school discussion group for girls and young women from 10 to 18 years old.

Sponsored by the Ford Foundation and New York-based International Women's Health Coalition, Girls' Power holds weekly meetings to help adolescent women build confidence and talk openly about many areas of their lives. The program also teaches a variety of job skills, including such male-dominated vocations as carpentry and money management. "Without becoming empowered through an educational program, they would not realize their capacity to cope with their own prejudices, and gender prejudices in society," Dr. Madunagu says.

Lack of self-confidence is a problem for many adolescents, especially girls. "At early stages of life, the problems for boys and girls are the same," says Muhammad Ibrahim, director of the Adolescent Girls Program in Bangladesh, an educational effort for rural girls throughout the Asian country. "But when it comes to the teenage years, girls are doubly disadvantaged. It is not just poverty, but also social values that prevent girls from developing in a healthy way. Girls and boys are treated differently. While boys are able to go on with their training, their freedom to move about and to play sports, girls are taken out of circulation."

In Bangladesh, she says, girls typically are not allowed to leave their homes, go to the marketplace alone or ride a bicycle, especially in rural areas, after puberty begins. They often leave school at age 13 or 14 to get married.

For health-care providers who see young adults infrequently, helping their young clients build self-respect and esteem may seem difficult. Providers, however, can contribute to improved esteem by establishing a caring relationship with adolescent clients.

"Providers should treat clients with respect, and a lot of them do not do that with adolescents," says Dr. Waszak, who has recently evaluated women's and girls' skills-

building programs run by the World Association of Girl Guides and Girl Scouts (WAGGGS) at refugee camps in Zimbabwe, Uganda and Kenya. "When clients are not treated with respect, it certainly has an impact on a person's self perception. It never makes anyone feel good to be treated judgmentally, rudely or condescendingly, or just turned away."

Simply having access to an adult counselor can help young adults to practice safer sex. A Baltimore, MD, family planning clinic provided individual and group counseling at two high schools during school hours, and at the clinic after school.



BENÉ MADUNAGU OF GIRLS' POWER INITIATIVE

Free services included contraceptive counseling, pregnancy testing and referrals. Students who did not need these services could still visit to discuss issues or watch films. During the three-year program, the pregnancy rate among girls at the two schools declined significantly while pregnancy rates at other high schools increased.<sup>2</sup> Experts at-

tribute the program's success to the accessibility of trained staff who treated their young clients respectfully.

"Why did this program work? Because it offered practical services, but also treatment by caring providers," says Dr. Laurie S. Zabin, professor of population dynamics at Johns Hopkins University in Baltimore, who studied the school program. "Teenagers care very much whether their providers are caring. The identification of a teenager with a provider in a loving relationship over time is a wonderful way to build motivation. All these factors appear to have created an atmosphere that allowed teenagers to translate their attitudes into constructive preventive behavior."

## BUILDING SKILLS

Once a sense of trust is established between a young adult and a provider or counselor, specific skills should be taught. Some of the skills that sexually active adolescents should learn include the ability to obtain and use condoms, as well as to be able to communicate about contraceptive use and STD

prevention with a partner. All young adults should be capable of saying "no" to sex, but may need help in learning to assert themselves.

"Self-esteem without skills is hollow," says Dr. Susan Newcomer at the National Institute of Child Health Development (NICHD), a federal research agency in the United States. "If you tell teenagers to feel good about themselves when they do not have any substantive reason to feel good about themselves, you are not helping them. Real self-esteem comes from being able to do something well."

Such skills can be introduced through a variety of exercises. These include values clarification, decision-making practices and behavior reinforcement through role modeling and positive feedback. School and clinic programs can enable students to talk about their personal feelings, including how they feel about sexual activity and safe sex behavior, in order to identify which components of preventive behavior may be difficult for a particular individual, and why.

Such programs may address students' specific sexual histories, their skill levels for HIV and pregnancy prevention, and communication strategies. Sex education programs in the United States that offered values clarification and skill-building exercises were more likely to be successful than those that did not, according to one study.<sup>3</sup> Learning the ability to protect oneself against sexual risk is especially important for an adolescent, says Dr. Newcomer.

Even when motivation exists, obtaining contraception is not always easy for young adults. A study in Ghana found that 18- and 19-year-old unmarried women were discouraged from using family planning by providers. One woman who visited a health clinic to get a contraceptive reported, "Because I was young and not married and was not sure when I would be getting married, I was told it would not be advisable to be taking the pills."<sup>4</sup>

Even when adolescents have better access to contraception, some may not take precautions. Adolescents in the U.S. city of New Orleans, LA, were not more likely to use contraception just because they knew about it and where to get it, according to a study. Of 228 pregnant adolescent women, 86 percent said they knew about contraception at the time they became pregnant, but

only 16 percent reported using a method. Increasing knowledge, without addressing the underlying psychological needs of young adults, will not necessarily lead to safer behavior, the study authors concluded.<sup>5</sup>

Social norms and other cultural influences also play a role. "Too much emphasis on self-esteem makes it sound as if you're saying, 'If teenagers only thought right, they wouldn't have any problems,'" says Dr. Zabin of Johns Hopkins. "They have to face poverty, violence and a harsh reality. An individual's social world is the setting in which the risk behavior is taking place. It is our responsibility as providers to help change that environment, not simply to blame a teenager's self-image for her failures."

#### WHEN PREGNANCY OCCURS

Adolescents who do become pregnant often face a variety of psychological or social barriers to good reproductive health. Pregnancy may be a time when an adolescent's self-esteem is at its lowest. This makes it difficult not only to plan wisely for the pregnancy, but may also affect a

woman's attitudes about future pregnancies or her willingness to protect herself from STDs.

For young married women in their first pregnancies, addressing emotional concerns can help promote a safer, more successful pregnancy. When pregnancy is out of wedlock or unplanned, the emotional consequences can be severe. An unmarried pregnant adolescent often faces her dilemma without the support of her family, partner or peers. In some cultures, she may be scorned or may have difficulty obtaining adequate services for pregnancy counseling or prenatal care.

Receiving support from others can be important. A study in Baltimore found that pregnant adolescents receiving support in their decisions from a parent or another adult, and those few who did not consult a parent, were more satisfied with their decisions to continue or terminate their pregnancies than adolescents whose parents did not support them.<sup>6</sup>

An FHI study of 519 adolescents, ages 12 to 18, who sought prenatal care or abortion-related emergency services at a hospital in Fortaleza, Brazil, is examining such issues as self-esteem and the relationships the women have with family and partners.

When asked in separate questions if they wanted to get pregnant when they did or would have preferred to delay pregnancy, about one woman in every five answered "yes" to both. These contradictory answers may indicate the ambiguous feelings many women have, researchers say.

Preliminary findings also show that many adolescent mothers do not receive emotional support from their families. Some 58 percent of the pregnant girls said their mothers reacted positively to the news of their pregnancy, and only 45 percent reported support from their fathers. By contrast, 71 percent of the pregnant women's partners were supportive of the pregnancy, says Dr. Patricia Bailey of FHI.

"For young women, becoming pregnant will change their lives dramatically," says Donna McCarragher, an FHI evaluation specialist working on the study. "They will be less likely to go back to school, they will earn less money, and their situation can be a source of tension with their partners and family."

— Sarah Keller

#### REFERENCES

1. Ankrah ME. Adolescence: HIV and AIDS in sub-Saharan Africa. Presented at *Workshop on Adolescent Reproductive Health in Sub-Saharan Africa*, The Centre for Development and Population Activities, Feb. 13, 1996.
2. Zabin LS, Hirsch MB, Smith EA, et al. Evaluation of a pregnancy prevention program for urban teenagers. *Fam Plann Perspect* 1986;18(3):119-26.
3. Kirby D. Sexuality education: A more realistic view of its effects. *J School Health* 1985;55(10):421-24.
4. Stanback J. The impact of family planning services delivery guidelines dissemination in Ghana. Unpublished paper. Family Health International, 1997.
5. Landry E, Bertrand JT, Cherry F, et al. Teen pregnancy in New Orleans: Factors that differentiate teens who deliver, abort, and successfully contracept. *J Youth Adolesc* 1986;15(3):259-74.
6. Zabin LS, Hirsch MB, Emerson MR, et al. To whom do inner-city minors talk about their pregnancies? Adolescents' communication with parents and parent surrogates. *Fam Plann Perspect* 1992;24(4):148-73.

CYNTHIA WASZAK/FHI



BUILDING SELF-RESPECT AND ESTEEM MAY HELP YOUNG PEOPLE TO MAKE BETTER DECISIONS REGARDING REPRODUCTIVE HEALTH MATTERS. THESE YOUTH IN KENYA ARE TAKING PART IN A GIRL GUIDES ACTIVITY.

## "THEY WERE CONCERNED ABOUT MY FUTURE"

*Editor's Note: The Women's Centre of Jamaica Foundation serves young women, including a program for adolescent mothers that helps them continue with their education in order to acquire better job skills. Charmaine Johnson, the foundation's financial manager, recalls her own experiences as a pregnant teenager, and how the foundation helped her.*

By Charmaine Johnson  
Women's Centre of Jamaica  
Foundation

KINGSTON, Jamaica — I learned about the Women's Centre of Jamaica Foundation through teachers at the high school I was attending. They were con-



cerned about my future and knew that the center's program would put me back on the path to achieving my goals.

At the Kingston Women's Centre, I was taken into the arms of people who knew my situation, did not discriminate against me, thought that I was capable of tremendous achievements and encouraged me to fulfill that potential.

I was cushioned by counselors who made me realize that despite my unplanned pregnancy, my dreams and aspirations could

still be realized. They showed me where I had made mistakes and helped teach me how to love and care for the unborn child who was already mine.

There were weekly family life classes, where I learned about contraception and caring for an infant. These classes featured group discussions, talks by specialists, distribution of articles and pamphlets, films and individual counseling.

Having to deal with my parents and boyfriend would have been difficult, but my family life counselor met with my mother to discuss matters. My mother quickly became very understanding and supportive, which made me so comfortable and gave me a feeling of acceptance. This feeling motivated me and boosted my self-esteem. I'm sure it gave me the will power to prove myself, the desire to make her proud of me.

There were other adults who helped me, including teachers who guided my continuing education through my pregnancy. They prepared me for re-entry into school by providing the syllabuses that were being taught.

That was 10 years ago, when I was only 15. I now live with my lovely daughter, Jenise, who is 10, and my mother. Programs that seek to help young adults should remember how other adults, especially parents, can help their clients. Parents can understand, and programs should build upon that bond between parent and child.

### PREPARING FOR ADULTHOOD

Quite simply, the Kingston Women's Centre helped me prepare for adulthood at a crucial time in my life. Being a teenage mother is very difficult, and a young mother without guidance can easily fail. The center, along with my mother's support, helped prepare me for this new world I was in.

Proper care for my baby and myself was essential, and the ability to think and perform as an adult was equally crucial. I had to acquire these new attitudes. I was still a teenager, and acted like one when among peers. Hence, I was burdened with a double role of being a teenager at school and a mother at home.

The center surely helped me to emerge as an adult, to become the woman I am today. I am strong, I am able to encourage other young women to continue their dreams. I am better prepared to give my only child the guidance and love that she needs. Academically, I achieved my goals. I was given the opportunity to return to school and move to higher levels.

But this strength, and the achievements that followed, were not easy to acquire. At the time, learning I was pregnant was more than I thought I could bear. At first, I did not believe the doctor. I had to be tested twice by separate doctors before accepting this reality. And when I began to accept my condition, tears filled my eyes. I felt as though I was locked in a building with the keys thrown away.

My greatest fear was thinking that I had to sit at home taking care of an infant that would destroy my dreams. I would not be able to become an accountant or teacher, as I had planned. I thought about how disappointed my teachers would be.

Despite these fears, my teachers were very supportive and visited me through my pregnancy. The Kingston Women's Centre, my teachers and my mother's unshakable faith in me helped bring me to my feet again.

Whenever I see a young woman who is pregnant today, I talk to her and invite her to visit the Women's Centre. When she goes there, she will know that people care about her. She will be encouraged to continue her education, she will learn about family planning and will acquire other important skills, and she will gain important insights about herself.

# Media Can Contribute to Better Health

Used effectively, media inform youth about reproductive health concerns and how to obtain services.

In most parts of the world, young adults are exposed to media that refer to sex and romance, often with little or no mention of responsible sexual behavior.

Casual sex is depicted, but without references to sexually transmitted disease or unintended pregnancy.

Nevertheless, television, radio, music, magazines and other media can also become powerful tools for giving young adults perspective on the consequences of sexual activity. HIV prevention media campaigns in Uganda, for example, have played a major role in encouraging safer behavior. During the 1990s, HIV prevalence among young women has declined in Uganda.<sup>1</sup> Some experts attribute the decline to a rise in monogamy, condom use in risky sexual relationships, and later age of sexual debut — behavior messages that were often emphasized in the HIV prevention media campaigns.

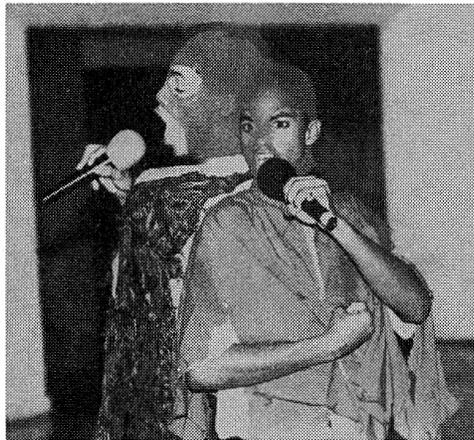
“Every study [in Uganda] shows the same trend of people reporting fewer casual partners, more condom use, and young girls delaying being sexually active,” says Elizabeth Marum, HIV/AIDS prevention technical advisor for the

U.S. Agency for International Development in Kampala, Uganda, who cautions that the specific role played by media is not clear. “What to attribute these new behaviors to is the question of the hour.”

Better research is needed to understand how media campaigns influence behavior, although observers agree that media used effectively can

make an important contribution. One such example is a nationwide media campaign promoting safer sexual behavior among Ugandan adolescents, including abstinence, partner reduction and condom use. Beginning in 1995, the campaign by the Delivery of Improved Services for Health (DISH)

NICK SHEARS



A MUSICAL PERFORMANCE FOR YOUNG ADULTS DISCUSSES STD INFECTIONS.

Project, implemented by Pathfinder International and Johns Hopkins University, promoted HIV prevention messages through songs and soap operas, rap music contests, drama, a newsletter and posters.

The "Hits for Hope" portion of the campaign invited music groups to compose and perform songs about HIV prevention. Eighty groups performed for audiences in 10 different districts. The winning song, "Ray of Hope," by House Lane B, a Kampala-based group, was selected by judges representing the target audience, men and women ages 15 to 19.

The song was then recorded on cassettes, distributed to taxi drivers and youth centers, and sold commercially.<sup>2</sup> In surveys of 1,681 adolescents, many of them out of school, the percent who reported using condoms increased from 46 percent before the campaign to 69 percent afterwards, and the percentage who reported they did not know where to get condoms declined, from 42 to 31 percent.<sup>3</sup>

While a definitive relationship between the campaign and condom use has not been established, the behavior change "definitely coincides with the time of the campaign,"

says Cheryl Lettenmaier, DISH communication advisor in Kampala. "The consumption of condoms has gone way up. There has been a change in attitudes."

Other media campaigns were used in Uganda. The AIDS Information Center, for example, used radio announcements to attract clients to anonymous and voluntary HIV testing services over several years. When the program advertised special days for young adults to receive free testing, young people turned up in large numbers.

#### FAMILY PLANNING

Research in Nigeria suggests that media campaigns can help influence family planning behavior. A 1993 survey of Nigerian reproductive age women correlated current use of contraception with whether the women had watched television music videos three years earlier.

The videos featured two songs, "Choices" and "Wait for Me," by popular Nigerian musicians King Sunny Adé and Onyeka Onwenu that conveyed family planning messages and encouraged clinic visits.<sup>4</sup> Of 6,879 women surveyed, about 13 percent

of those who reported having heard or seen the videos were using contraception, compared to 4 percent of those who had not.

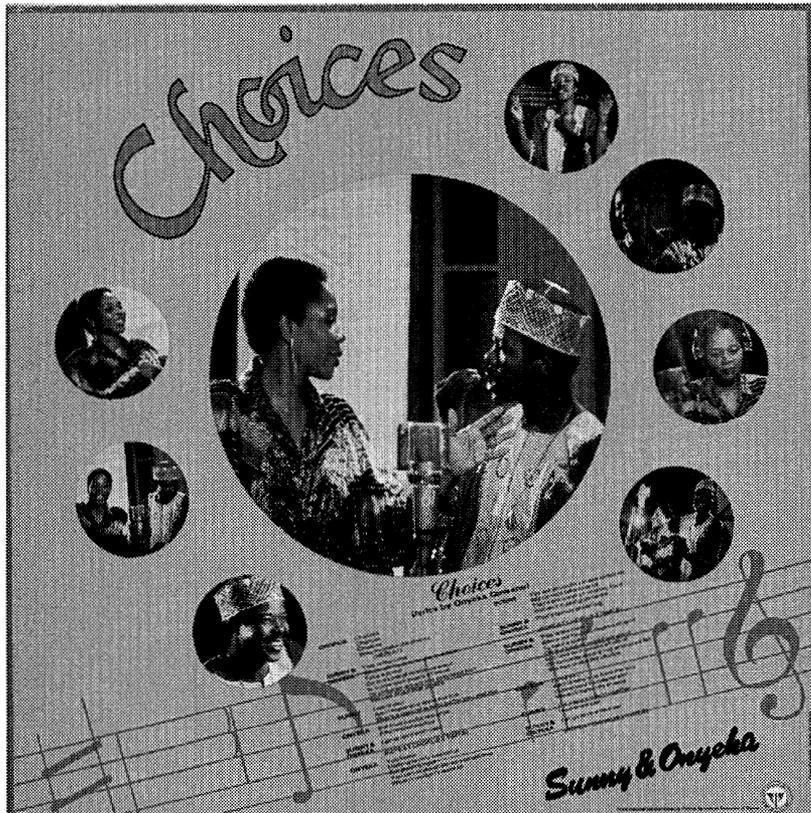
Women who were exposed to pro-family planning messages seemed to be more likely to use contraception and desire fewer children, even when other variables such as education and urban residence were taken into account. The Nigerian study is not conclusive, however, because it is possible that women who heard the songs were more likely to be contraceptive users for other reasons. For example, 12 percent of those who remembered hearing or seeing the videos said they had used contraception in the past and intended to use it again, compared to only 3 percent of those who did not recall the videos.

Many experts believe that media campaigns are an effective way to inform people about where to obtain contraceptive services or other reproductive health care. Clinic locations, hotline phone numbers and referral networks can be included in media campaigns. In 1988, a popular music campaign in 12 Latin American countries, using the singers Tatiana and Johnny, generated high audience approval ratings, but the campaign did not include any messages telling listeners where to go for services. The omission made it difficult to assess the campaign's impact, according to an evaluation.<sup>5</sup>

Mass media may be especially useful for teaching young adults because media can use elements of popular culture to articulate a message in young people's own terms. Campaigns seem to be more effective if messages appear in different media simultaneously — music, television, radio, movies and posters. For example, a 1992 AIDS prevention campaign by the National Youth Union and CARE International in Vietnam combined leaflets, television, radio, posters, newspaper articles, booths, discussion groups, and a parade on World AIDS Day.<sup>6</sup>

A mass media campaign can use celebrities, such as musicians, as role models to demonstrate healthy behavior. However, role models who do not practice what they preach or who behave irresponsibly can have a negative impact on the public's acceptance of campaign messages.

PLANNED PARENTHOOD FEDERATION OF NIGERIA



A NIGERIAN POSTER PROMOTES "CHOICES," A SONG THAT ENCOURAGES FAMILY PLANNING.

Before any campaign begins, the message and objectives of the campaign must be tailored to fit both the audience and the setting.<sup>7</sup> This process should begin with a careful review of the audience, an assessment of current policies and programs that affect the reproductive health services available, and an evaluation of communication resources. Focus group research and pre-testing materials can reveal specific audience needs and help gauge the effectiveness of new materials before they are reproduced and widely distributed.

— Sarah Keller

## REFERENCES

1. *The Status and Trends of the Global HIV/AIDS Pandemic Final Report*. (Arlington, VA: AIDSCAP/Family Health International, Harvard School of Public Health and UNAIDS, 1996)17.
2. Lettenmaier C, Gamurorwa A, Sengendo J. Report on the "Hits for Hope" music competition in 10 DISH districts, May-June 1995. Unpublished paper. Johns Hopkins University, 1995.
3. Lewicky N, Lettenmaier C, Sengendo J, et al. The Uganda HIV/AIDS youth communication campaign: preliminary evaluation results. Presented at the 124th Annual Meeting of the American Public Health Association, New York, Nov. 17-21, 1996.
4. Bankole A, Rodriguez G, Westoff C. Mass media messages and reproductive behavior in Nigeria. In Westoff C, Rodriguez G, Bankole A, eds. *Mass Media and Reproductive Behavior*. Chapel Hill: The EVALUATION Project, 1995.
5. Kincaid DL, Valente TW, Merritt P, et al. Sex and contraceptive use among adolescents in Lima and Mexico City. Presented at the 120th Annual Meeting of the American Public Health Association, Washington, Nov. 8-12, 1992.
6. Franklin B. Targeting young men: audience-centered communication for AIDS prevention in Vietnam. Unpublished paper. CARE International, 1994.
7. DeJong W, Winsten JA. The use of the mass media to communicate public service messages: lessons learned from past campaigns. Unpublished paper. Harvard School of Public Health, 1996.

## News Briefs

Continued from page 2

The new study is part of the U.S. Collaborative Review of Sterilization (CREST), an ongoing research effort that involves more than 10,000 women. Findings from that research released in 1996 reported a 10-year cumulative failure rate of 18.5 pregnancies for every 1,000 tubal sterilizations, a higher failure rate than past studies found.

### TWO-ROD IMPLANT EASIER TO REMOVE

A recent study of a two-rod contraceptive implant concludes that removing the experimental device is easier and faster than removal of the widely available six-rod Norplant system.

In clinical trials involving 1,400 women in Chile, the Dominican Republic, Egypt, Finland, Singapore and the United States, the Population Council of New York found that removals for the two-rod system averaged about 10 minutes for typical providers, compared with about 20 minutes to remove the six-rod Norplant. Both insertion and removal of the new device involved fewer difficulties.

"Two are easier to place and remove than six," says Irving Sivin, senior scientist at the Population Council, who coordinated the clinical trials. "There are fewer mechanical events — rods breaking during removal, administering anesthesia underneath the rods to stop the swelling, and capillary bleeding."

The study also concludes that the two-rod implant is safe to use and very effective, with a pregnancy rate of only two pregnancies per 1,000 users over a three-year period, or a 0.06 percent risk of pregnancy in one year. Side effect rates with both devices were about the same. Results of the clinical trials were published in the February 1997 issue of the journal *Contraception*.

The Population Council developed both the six-rod Norplant and the new system, which consists of two 43 mm rods using levonorgestrel (LNg), a progestin. LNg diffuses gradually from the rods into the bloodstream, suppressing ovulation and thickening cervical mucus to block the passage of sperm. In 1996, the U.S. Food and Drug Administration approved the two-rod implant for women to use up to three years, but the device is not currently marketed in any country.

### HIV DRUG OFFERS HBV THERAPY

A drug designed to treat people infected with the HIV virus may also be effective as a hepatitis B therapy.

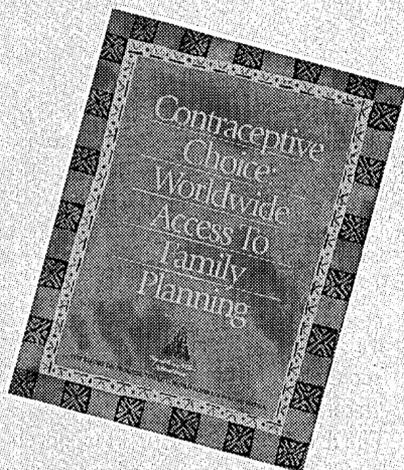
The drug, lamivudine or 3TC, developed by Glaxo Wellcome based in London, under the brand name Epivir, inhibits replication of viral DNA. In clinical trials involving 358 people in Hong Kong, Singapore and Taiwan, the drug helped patients who had severe liver disease caused by hepatitis B.

After one year of treatment, liver disease was less advanced among patients who received 100 mg of lamivudine daily compared with patients who did not. Sixteen percent of patients receiving the treatment achieved undetectable levels of hepatitis B, compared with only 4 percent of patients receiving a placebo. Hepatitis B causes liver damage and may be transmitted sexually. The virus is also transmitted by blood transfusion, occupational exposure, or as a consequence of intravenous drug use. Results of the multi-center trial were presented April 10 at the annual meeting in London of the European Association for the Study of the Liver.

# Resources

## PAI CONTRACEPTIVE CHOICES WALL CHART

Despite dramatic increases in contraceptive access over the past decade, the range of method choice remains limited. A wall chart published by Population Action International (PAI) entitled



*Contraceptive Choice: Worldwide Access to Family Planning* summarizes data from 127 countries on the accessibility of the five most widely used modern contraceptive methods — condoms, oral contraceptives, intrauterine devices, female sterilization and vasectomy. Developing countries typically offered fewer choices than developed countries. The wall chart is free to developing country providers. Write: Carolyn Ross, Publications Department, Population Action International, 1120 19th St. NW, Suite 550, Washington, DC, 20036 USA or call (202) 659-1833, or fax (202) 293-1795.

## REPRODUCTIVE RIGHTS REPORT

A report by the Center for Reproductive Law and Policy endorses reproductive rights as a first step toward addressing economic and social problems worldwide. *Promoting Reproductive Rights: A Global Mandate* highlights recent international advances. It urges developed countries to dedicate resources to support recent declarations on advancing reproductive rights from several United Nations conferences. The report focuses on four key areas: declaring women's rights as human rights; endorsing the individual's right to reproductive decision-making; condemning violence against women; and affirming the right of access to reproductive health services, including family planning, maternal and child health care and STD prevention. Copies are available in English for U.S. \$10 in developed countries, and at a negotiable price to nongovernmental organizations in developing countries. Write: Andrea Miller, Director, Education and Communication, Center for Reproductive Law and Policy, 120 Wall St., New York, NY, 10005 USA, or call (212) 514-5534, or fax (212) 514-5538.

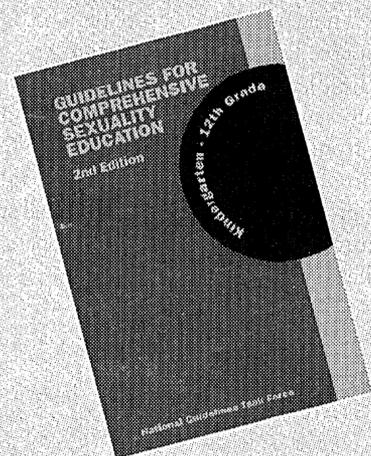
## ARROW RESOURCE KIT

The Asian-Pacific Resources & Research Centre for Women (ARROW) has published a resource kit entitled *Women-centered and Gender-sensitive Experiences: Changing Our Perspectives, Policies and Programmes on Women's Health in Asia and the Pacific*. The kit outlines ongoing and suggested efforts to promote women's health needs and provides guidelines for developing a gender-sensitive orientation in existing family planning programs. It is designed for policy-makers, health practitioners, family planning associations and

others. Copies are available in English for U.S. \$62. Write: ARROW, 2nd floor, Block F, Anjung FELDA, Jalan Maktab, 54000 Kuala Lumpur, Malaysia, or fax (60) 3-292-9958.

## SIECUS SEXUAL EDUCATION GUIDELINES

A task force of specialists in health, education and sexuality in the United States has compiled a set of guidelines on developing sexual education programs for all levels of primary and secondary school students, ages 6-18. *Guidelines for Comprehensive Sexuality Education, 2nd Edition* helps local communities design new curricula and can also be used to assess existing programs. It has been used in many countries, including Brazil, Nigeria and Russia.



Developed by the New York-based Sexuality Information and Education Council (SIECUS), the guidelines identify specific health topics and related concepts that are appropriate for children of different ages, ranging from basic reproductive development and sexual health practices to relationship issues and interpersonal skills. Spanish or English copies are available for U.S. \$5.75, plus U.S. \$4 for shipping the English version and \$7 to ship Spanish. Write: SIECUS, 130 West 42nd St., Suite 350, New York, NY 10036, USA, or call (212) 819-9770.