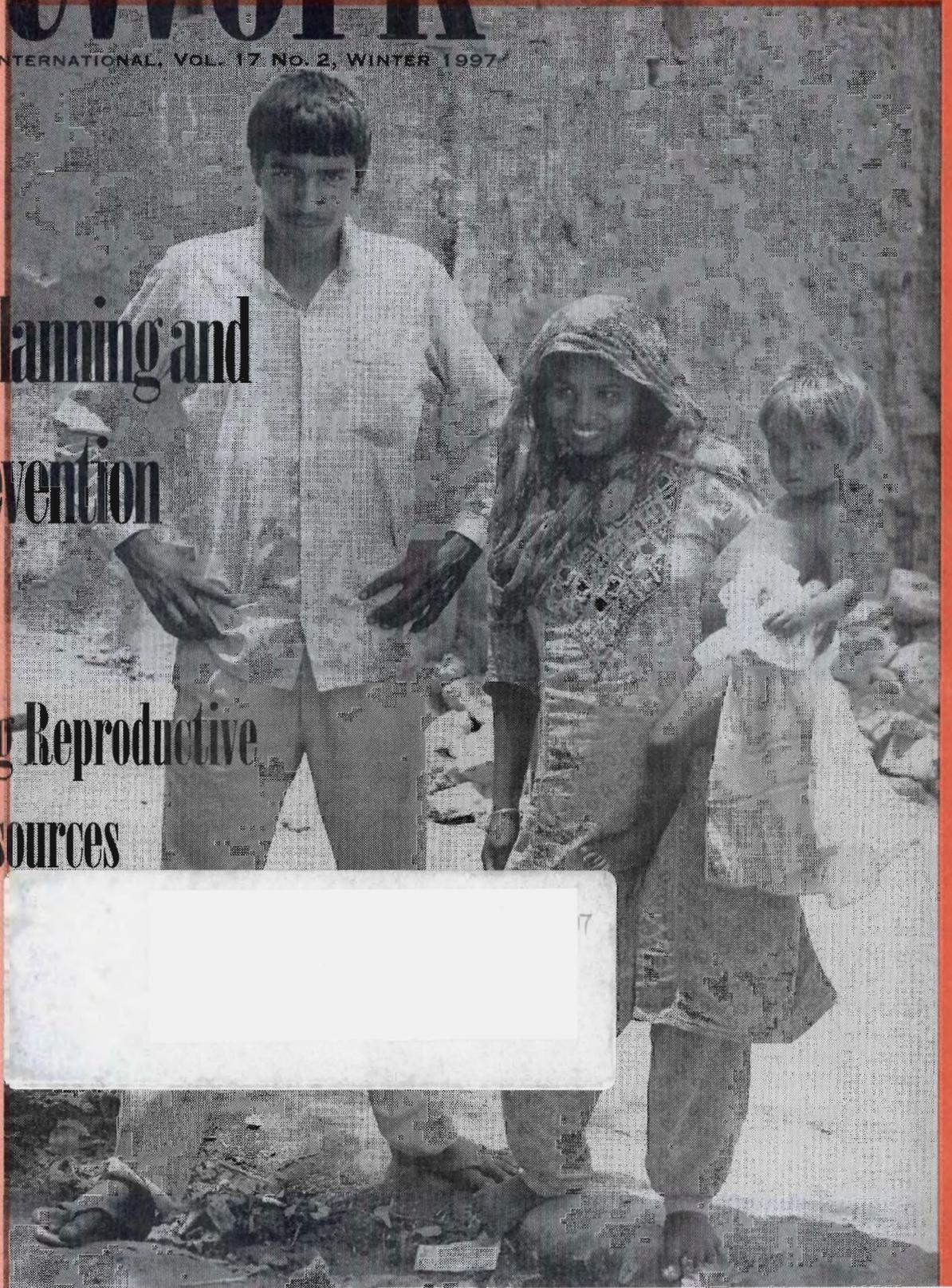


Network

FAMILY HEALTH INTERNATIONAL, VOL. 17 NO. 2, WINTER 1997

**Family Planning and
AIDS Prevention**

**Maximizing Reproductive
Health Resources**



News Briefs

LAM EFFECTIVE AT 12 MONTHS

A way to use breastfeeding to achieve contraception, called the lactational amenorrhea method (LAM), appears to be highly effective for 12 months after delivery among women who remain amenorrheic.

A recent study found a pregnancy rate of less than 3 percent among women using LAM for 12 months. This compares favorably with such methods as oral contraceptives, which are also about 97 percent effective during a year of use.

Experts have recommended LAM as a reliable contraceptive approach for six months following delivery among amenorrheic women who are fully or nearly fully breastfeeding. When any of these conditions changes, a woman should begin using another contraceptive method to prevent unplanned pregnancy.

The findings indicate that women who breastfeed intensively and remain amenorrheic can rely on lactational amenorrhea to prevent pregnancy, explains Cynthia Visness of FHI, one of the study authors. "They need to make an informed choice, though, and understand the degree of risk of pregnancy," she says. "For women who remain amenorrheic up to a year, this approach gives them more time and flexibility in starting another method."

The study followed 485 women in the Philippines. About one-third of the women remained amenorrheic 12 months after delivery. Because many breastfeeding women do

not remain amenorrheic for a full year, new mothers cannot count on LAM protection lasting for that long, Visness says. "The most important marker of return to fertility is the return of menses," she says. "Whenever that occurs, a woman needs to start using another method immediately."

Published in the Oct. 12, 1996 issue of the *British Medical Journal*, the study was conducted by the Comprehensive Family Planning Center, Jose Fabella Memorial Hospital in Manila and FHI. An earlier study, conducted by the National Research Institute for Fertility Control in Karachi, Pakistan, and FHI, found a pregnancy rate of only 1 percent at one-year postpartum among those women who remained amenorrheic.

CHLAMYDIA RISK EQUAL FOR MEN, WOMEN

A recent study concludes that women and men are at equal risk of infection from chlamydia through sexual contact. Previous studies indicated women were more susceptible to infection.

The study, sponsored by the U.S. National Institute of Allergy and Infectious Diseases (NIAID), examined 958 people over four years. Clients who visited a clinic in Baltimore, MD, USA, and their partners, were tested for chlamydial infection using a variety of diagnostic techniques. Researchers found that men and women had an

equal chance of becoming infected by their partners: Two-thirds of male partners of infected females and two-thirds of female partners of infected males contracted chlamydia.

Chief researcher Dr. Thomas Quinn, of NIAID's Laboratory of Immunoregulation and Johns Hopkins University School of Medicine, says the equal transmission rates were determined by using a new, sensitive urine assay to screen for the infection. Traditional cell culture tests, which were also given, showed higher rates among women.

"The old standard about men being resistant to chlamydia isn't true," says Dr. Quinn. "They should be screened just as much as women. If they're positive, you can treat them and that will lower the infection rates overall. In the long-run, that will reduce the complications in women." Chlamydial infection in women can lead to more serious problems, including pelvic inflammatory disease (PID).

The study also concluded that young women are three times more likely to acquire chlamydia than older women. "Age is the single most important demographic variable," Dr. Quinn says. Results of the study were published in the Dec. 4, 1996 issue of the *Journal of the American Medical Association*.

Since chlamydia is more likely to be detected using the new urine test, NIAID is recommending that the test be used more widely. Two versions of the test are already available in many parts of the world.

PPFA CLINICS DROP PRE-TEST

Planned Parenthood Federation of America (PPFA), an organization with family planning clinic affiliates throughout the United States, has eliminated its requirement for medical testing prior to insertion of an intrauterine device (IUD).

The National Medical Committee of PPFA agreed to change language in the organization's guidelines from "must" to "as indicated" for blood tests and laboratory diagnosis for chlamydia and gonorrhea before an IUD is inserted, effective January 1.

IUDs can now be inserted without any testing if a client's medical and personal histories are appropriate. The change is consistent with 1994 U.S. Agency for International Development guidelines for developing countries, which say a routine pre-exam (a separate visit) should not be required, since two visits may be a barrier to IUD use and may expose a woman to unintended pregnancy between the visits.

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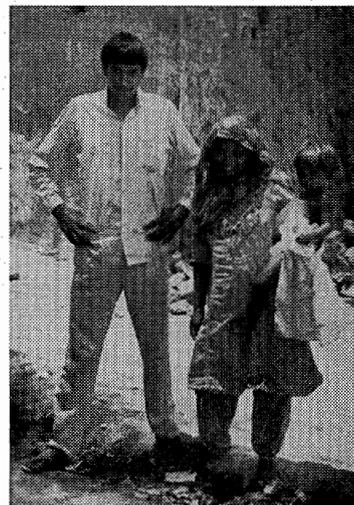
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Cover photo by the United Nations Children's Fund (UNICEF/5850/Vilas) shows a typical family in New Delhi, India. Ways to maximize reproductive health resources include the combination of family planning services with appropriate STD/HIV prevention activities.



Ounce of Prevention Worth a Million Lives

By Peter Lamptey, MD, DrPH
FHI Senior Vice President, AIDS Programs

Willard Cates, Jr., MD, MPH
FHI Senior Vice President, Biomedical Affairs

Since the XIth International AIDS Conference in Vancouver last July, news of continued important treatment breakthroughs has raised hopes and expectations. Researchers have reported that the new protease inhibitors, taken in combination with other AIDS drugs such as AZT, ddC and 3TC, can reduce the amount of HIV in infected people to undetectable levels. Some scientists even speak — cautiously — about the possibility of eradicating HIV from infected people. As testimony to the optimism, the popular U.S. magazine *Time* proclaimed Dr. David Da-i Ho of Aaron Diamond Research Institute in New York as its 1996 “Man of the Year” for his scientific leadership in these treatment efforts.

The results from trials of a new generation of anti-HIV drugs are indeed encouraging. But the excitement over these findings has obscured what is — and will continue to be — our most potent weapon against the virus: prevention. Worse still, it may undermine prevention efforts by encouraging the mistaken impression that scientists have found a “cure” for AIDS.

Anyone who works in any area of reproductive health must remember the urgent and global need for effective HIV prevention strategies, and that this need will be with us for many years to come. For those

who work primarily with family planning, seeking creative ways to incorporate appropriate, cost-effective STD/HIV prevention activities into their programs must continue to be a priority.¹ Promoting condom use among clients at risk of a sexually transmitted disease is just one example of how family planning providers in many countries are already making an important contribution to HIV prevention.

NO REPLACEMENT

Although powerful antiviral drug combinations will make it possible to improve and extend life for many who are infected with HIV, drug treatment will never replace prevention. These therapies are already proving unaffordable for poor and underinsured North Americans. The cost — at least U.S. \$10,000 per patient per year — guarantees that they will not be accessible to most people with HIV/AIDS in developing countries, where 90 percent of all HIV infections occur.

Even for those who can afford them, the drug “cocktails” are not a cure. We do not know how long they can keep the virus in check, and the drugs do not work for everybody. Moreover, compliance is difficult: the three drugs must be taken several times a day with more than a liter of water, some on an empty stomach and others with a high-fat meal.

The cost and complexity of the three-drug regimen and the remarkable ability of HIV to mutate more rapidly than any other known virus raises the specter of multiple drug resistance. If patients do not take the drugs correctly, or if treatment is interrupted because of adverse side effects or a patient's inability to afford a new prescription, strains of HIV will develop that are resistant to many, if not most, of the limited number of drugs currently available. These resistant strains will be transmitted to others, making the drug combinations powerless against HIV even in people who have never taken them.

Further research will undoubtedly lead to more effective HIV/AIDS treatments that are easier for patients to take, and we must fight to make these treatments accessible to all. One possibility is a two-tiered pricing system to make the new drug combinations affordable in developing countries. Companies that reap huge profits from HIV/AIDS drugs in industrialized countries have a moral obligation to work with governments, nongovernmental organizations (NGOs) and people living with HIV/AIDS to expand access to these life-saving therapies.

Support for HIV prevention research could pay even greater dividends. Through applied research by HIV/AIDS prevention projects around the world, we know that the three main strategies of FHI's AIDS Control and Prevention (AIDSCAP) project and the Joint United Nations Programme on HIV/AIDS (UNAIDS) — communication to change behavior, condom promotion and improved STD services — can reduce transmission of the virus. Studies sponsored by the U.S. National Institutes of Health-funded HIVNET (HIV Network for Efficacy Trials) Consortium in nine international sites managed by Family Health International will identify new tools to complement these three strategies in de-

veloping countries. Methods under study include vaccines, microbicides, new approaches to counseling, and prophylactic perinatal drugs.

PREVENTION WORKS

Clearly, universal access to effective, affordable antiviral therapy is a distant goal. But the good news — news that has made few headlines — is that we can reduce the need for treatment. Data show that HIV prevention works — and at a fraction of the cost of drug treatment.²

As in basic and clinical research on HIV/AIDS, years of painstaking research and practice in prevention are beginning to pay off. For more than a decade, public health professionals and educators have been re-

fining effective approaches to slowing the spread of HIV.

We have figured out which strategies work and how to make them culturally sensitive, politically acceptable and economically feasible in some of the least developed regions of the world.

We have learned that some populations — among them, women and young people — are particularly vulnerable and require special programs that address their needs. And we've found out how to work with grass-roots organizations with strong community ties to ensure that prevention efforts can be sustained.

Here is what we have discovered:

Prevention education and communication can reduce risky behavior. Education, counseling and communication cam-

paigns give people the knowledge, skills and support they need to prevent HIV transmission. In Uganda, for example, the "ABC" message (abstinence, behavior change or condoms) is reaching young people through schools, community outreach and the media, and a 35 percent decrease in HIV prevalence among young women attending antenatal clinics suggests a substantial reduction in new HIV infections among 15- to 24-year-old girls and women from 1990-93 to 1994-95.³

In the United States, Australia and Western Europe, HIV incidence appears to be stabilizing, largely because of effective prevention efforts within gay communities. Even while in the Rwandan refugee camps, where the daily struggle for survival made AIDS seem a distant threat, many have responded to prevention education by becoming more faithful to their partners.

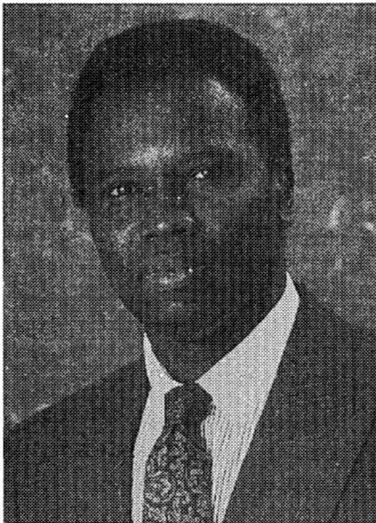
Treating sexually transmitted diseases helps prevent HIV transmission.⁴ The presence of preventable STDs increases susceptibility to HIV infection as much as nine-fold. Groundbreaking research in Tanzania has confirmed that STD treatment can reduce HIV transmission by more than 40 percent. This could make a big difference in the developing world, where most of the curable sexually transmitted infections occur.

Promoting condom use results in lower infection rates.⁵ In Thailand, aggressive condom promotion throughout the country and tough enforcement of condom use in brothels led to reductions in transmission of

HIV and other STDs. Skyrocketing condom sales in countries where condoms could hardly be given away just 10 years ago are another indicator of the success of HIV prevention interventions.

Social marketing programs that make condoms more accessible and attractive to potential users have increased

FHI



DR. PETER LAMPREY

FHI



DR. WILLARD CATES

HIV DRUG RESEARCH IS ENCOURAGING, BUT PREVENTION REMAINS THE MOST POTENT WEAPON AGAINST THE VIRUS. PEOPLE READ LEAFLETS DURING A SOUTH AFRICAN AIDS PREVENTION RALLY.



condom sales in countries from Haiti to Ethiopia to Nepal. In sub-Saharan Africa, annual condom sales rose from less than 1 million in 1988 to more than 167 million in 1995.⁶

Encouraging national policy change makes HIV prevention possible. Adopting policies that support rather than obstruct prevention efforts is one of the most important ways a government can protect its citizens from HIV infection. In Brazil, condom sales boomed after the government eliminated a 15 percent tariff on imported condoms. The Thai government's "100 Percent Condom Policy," which encourages consistent condom use among sex workers, has contributed to decreases in HIV and STD transmission, and has inspired similar efforts in the Philippines and the Dominican Republic. Throughout the world, when government leaders have spoken out about HIV/AIDS prevention, their openness has encouraged a more vigorous response to the epidemic.

Strengthening indigenous AIDS prevention organizations is the best way to reach communities and sustain prevention efforts. From 1991 to 1995, when political

unrest and an international trade embargo paralyzed Haiti, Haitian nongovernmental organizations valiantly continued the prevention effort. With support from FHI's AIDSCAP Project, funded by the U.S. Agency for International Development, these small groups initiated effective prevention programs in workplaces, schools, churches and community centers, reaching both urban and rural populations. And in Tanzania, AIDSCAP has helped NGOs abandon competition and collaborate on prevention programs in the regions of the country most affected by HIV/AIDS.

Comprehensive HIV prevention programs have the greatest impact. Experience has shown that combining these prevention approaches multiplies their effectiveness, creating a social and political environment that supports sustained behavior change and reduced risk. Just as combination HIV therapies are more effective against the virus in infected individuals, combination HIV prevention approaches have a greater impact on the virus in populations where it is prevalent. Family planning professionals have a vital role to play in this comprehensive approach.

BEST INVESTMENT

Despite the success of these prevention strategies, and the continued elusiveness of an effective and affordable cure or vaccine, only a small percentage of the funding for global HIV/AIDS efforts goes to prevention programs. Yet even when an effective vaccine against HIV becomes available, it will not be perfect, and we will still need all the other prevention approaches working together in combination. Thus, these combination HIV prevention strategies in populations are analogous to our need for combination HIV treatment approaches in individuals.

This need is now greater than ever. As many as 40 million people will have been infected with HIV by the end of the decade. In some regions, entire generations will be devastated by the disease, leaving behind hundreds of thousands of orphans dependent on charity and social services. As workers in their most productive years succumb to AIDS and national health budgets are stretched thin by the rising cost of caring for the ill, the economic fallout will strain the

struggling economies of developing nations. These pressures on fragile societies can intensify political unrest and instability.

If we fail to support HIV prevention while waiting for a medical "magic bullet," the consequences will be catastrophic. As we applaud biomedical advances in AIDS research, we must not forget that HIV prevention remains one of the best investments we can make in a healthier, more productive and more stable world.

Dr. Lamptey directs USAID's AIDSCAP Project and Dr. Cates oversees FHI's participation in the NIH HIVNET project. This article is adapted from one by Dr. Lamptey and Dr. Cates that appeared in AIDScaptions, a periodical published by the AIDSCAP Project.

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News Briefs

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In PPFA's U.S. clinics, medical testing "seemed to be a barrier to IUD use in some instances," says Kara Anderson, PPFA's nurse practitioner and consultant to the medical division. Clients who have a high risk of sexually transmitted disease (STD) should still be tested routinely for common STDs, says Anderson, since IUD use in infected women increases the risk of pelvic inflammatory disease (PID).

For all clients, PPFA providers continue to take careful medical and personal histories, including looking for symptoms and asking questions that may lead to contraindications. Providers are required to check for vaginal discharge, intermenstrual bleeding, vaginal inflammation and history of sexual contact in order to determine if a client is infected with an STD, Anderson says.

MIFEPRISTONE SAFETY, EFFICACY

The U.S. Food and Drug Administration (FDA) has determined that clinical data demonstrate the safety and effectiveness of an oral method of pregnancy termination, the use of the drug mifepristone in combination with misoprostol under close medical supervision.

Other issues, including manufacturing practices and labeling, must be approved by FDA before the method is available in the United States. Mifepristone for pregnancy termination is currently approved in France, the United Kingdom and Sweden.

Also known as RU-486, mifepristone comes in pill form and is taken to terminate pregnancy within the first seven weeks of onset of a woman's last menstrual period. The regimen involves taking three tablets of mifepristone (600 milligrams) followed two days later by two tablets (400 micrograms) of oral misoprostol.

"It can be offered by different kinds of providers and can be used earlier in a pregnancy (than surgical termination). It can be used as soon as a pregnant woman misses her period," says Dr. Beverly Winikoff of the Population Council, a New York-based research organization seeking FDA approval of mifepristone.¹

The FDA's September ruling was based on clinical trials conducted in France showing the approach was 95.5 percent effective in terminating pregnancy among 2,480 women. Side effects, similar to those of a natural miscarriage, included painful uterine contractions, nausea, vomiting, diarrhea, pelvic pain and headaches, but medical complications requiring hospital treatment were few. Uterine bleeding requiring curettage or blood transfusion occurred in 0.3 percent of the women.

NOTE

1. The U.S. Agency for International Development has not provided any financial assistance or other support in seeking the approval.

Risk Assessments Seek To Improve Screening

While STD assessment models show mixed results, modifying for local conditions improves usefulness.

The only way to be certain someone has a sexually transmitted disease (STD) is to identify the disease-causing microbe with laboratory tests, which are usually expensive and often require a client to return for results and treatment.

Consequently, the World Health Organization (WHO) has developed an approach for diagnosing and treating STDs without the use of laboratory tests. Called syndromic management, this approach is based only on a person's clinical signs and symptoms. More recently, WHO and other organizations have begun developing a tool called "risk assessment," which seeks to improve the accuracy of syndromic screening by including an evaluation of the client's behavior and other social circumstances that are correlated with STD risks. Having multiple partners, for example, suggests a greater STD risk than being in a monogamous relationship.

"STD risk assessments hold promise, but the research is mixed on their usefulness at this point," says Dr. Willard Cates Jr., FHI senior vice president of biomedical affairs and an expert on STDs. "What is clear is that any STD risk assessment has to be modified to individual countries and regions within countries, according to cultural issues, prevalence of various STDs and other factors."

Identifying infected clients by signs and symptoms alone (syndromic management) works well in some situations. For example, treating men with urethral discharge for gonorrhea and chlamydial infection is effective. However, identifying women with cervical infections, such as gonorrhea and chlamydial infection, has been less successful.¹ For many women infected with gonorrhea or chlamydia, there are no symptoms.

While risk assessment models are being studied as ways to improve the accuracy of diagnosis for treatment, they can also play a role in STD prevention strategies. For example, risk assessments can be used effectively by nearly any family planning program for counseling on contraceptive choices to improve STD prevention, says Laurie Fox of FHI, who studies STD services and family planning programs. However, she cautions, "Program managers should not add STD risk assessment to their routine services without understanding its limitations as a diagnostic tool."

CHECKLIST OF QUESTIONS

An STD risk assessment is simply a checklist of questions on demographic, behavioral and related factors. Questions cover such issues as the number of sexual partners a person has, the client's age, whether he or she has had a new partner in recent months, has had a previous STD infection, has symptoms such as a discharge or abdominal pain,

symptoms	Vaginal Discharge	risk score positive (2 or more)
signs	o discharge	
syndrome	o vaginitis	1
	o cervicitis	2
treatment		

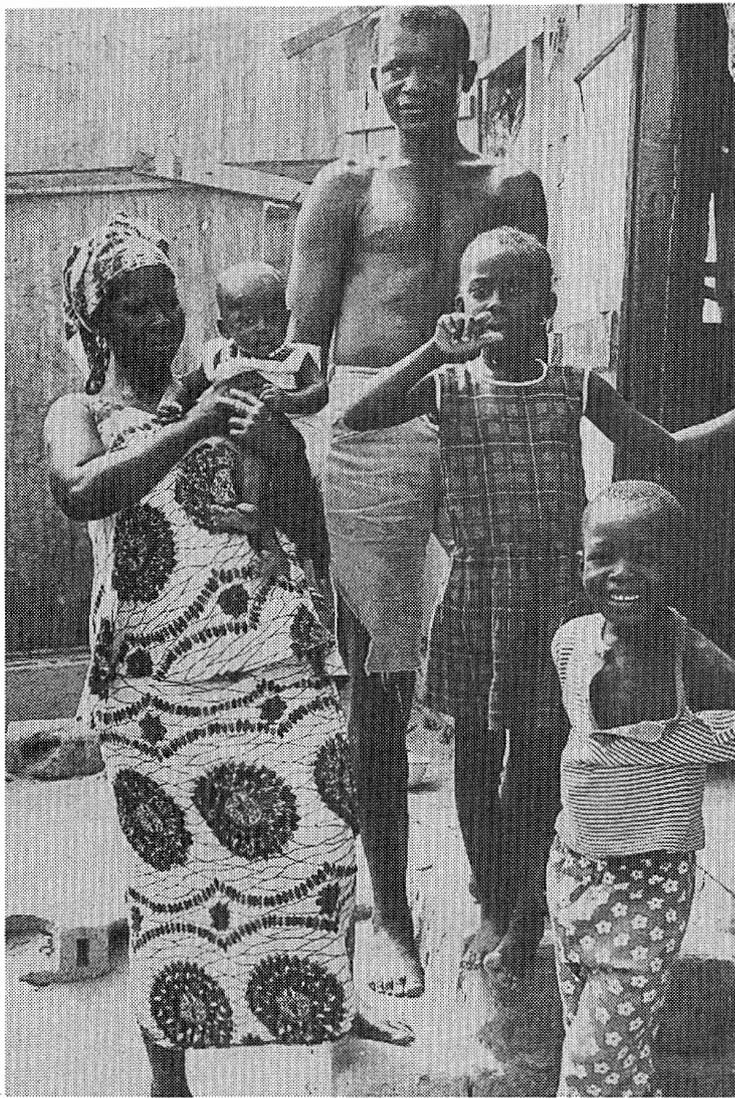
whether his or her partner has symptoms or other sexual partners, and whether the partner travels frequently.

In 1993, WHO developed a risk assessment tool to be used in conjunction with its syndromic management approach (also known as syndromic algorithms) for vaginal discharge.² "We suggested that certain variables would show an increased risk, such as being under age 21, having a symptomatic partner or having a new partner in the last three months," says Dr. Monir Islam, chief of the WHO's Family Planning and Population unit.

"But we should not have been so specific, because the risks will be different in different countries. A lot of countries took this new list as definitive," he says. For example, in some settings, women may not know if their husbands have symptoms. Couples may always have sex in the dark, which may mean that a woman would not observe her husband's genital ulcers or urethral discharge.

Among women with vaginal discharge, STD risk assessments based on local factors seem to improve the identification of those who have gonorrhea or chlamydial infection. Unfortunately, they also incorrectly identify many women as having an STD when they do not, thus leading to unnecessary treatments.

Treating uninfected people who are led to believe they have an STD can be emotionally traumatic, especially when they inform their partners. Hence, an uninfected wife asking her uninfected husband to be treated can imply that he or she has been unfaithful. Excessive treatment with antibiotics can also result in STD organisms that are resistant to the antibiotic.



BERYL GOLDBERG

SOME RISK ASSESSMENT MODELS INCORRECTLY IDENTIFY WOMEN AS HAVING AN STD WHEN THEY DO NOT, LEADING TO UNNECESSARY TREATMENT AND FAMILY DISCORD WHEN THEY INFORM HUSBANDS.

A study among 996 women attending an antenatal clinic in Haiti found that a risk assessment model based on local risk factors correctly identified almost nine of every 10 infected women. However, the model also concluded incorrectly that many uninfected women were also in need of treatment. For every five women designated by the model for treatment, only one was actually infected.

Among symptomatic women, risk assessment can increase the sensitivity of clinical diagnosis among infected women, concludes Frieda Behets of the University of North Carolina (UNC) Medical School,

USA, who led the Haiti study.³ (To evaluate such models, researchers compare the results of a risk assessment with laboratory testing.)

A study among 964 women attending a rural antenatal clinic in Tanzania compared nine risk assessment models. As in Haiti, risk assessments using local sociodemographic factors improved the performance of correctly diagnosing women with gonorrhea and chlamydial infections. One local risk assessment correctly discovered 69 percent of the women who had the diseases, but incorrectly identified about seven uninfected women for treatment for every one true infection it found.

The local assessments asked each woman (all were pregnant) if she was younger than 25, her marital status, number of sexual partners over the last year, whether she had any symptom related to genital infection, had previously given birth (indicating that sexual activity had not begun recently) and, if so, whether her most recent birth had been more than five years ago (indicating possible low fertility due to STD infection). Answers had weighted scores, with a certain total score or higher indicating treatment for gonorrhea and chlamydia.⁴

A study in Zaire among urban pregnant women used the results of a leukocyte esterase dipstick (LED) test on urine in addition to other factors, including age, marital status, number of sexual partners and symptoms. The LED, a simple test that does not require laboratory facilities, predicts possible infection using a color chart to show an elevated white blood cell count. This approach identified nearly three of every four infected women.⁵

PARTNER'S BEHAVIOR

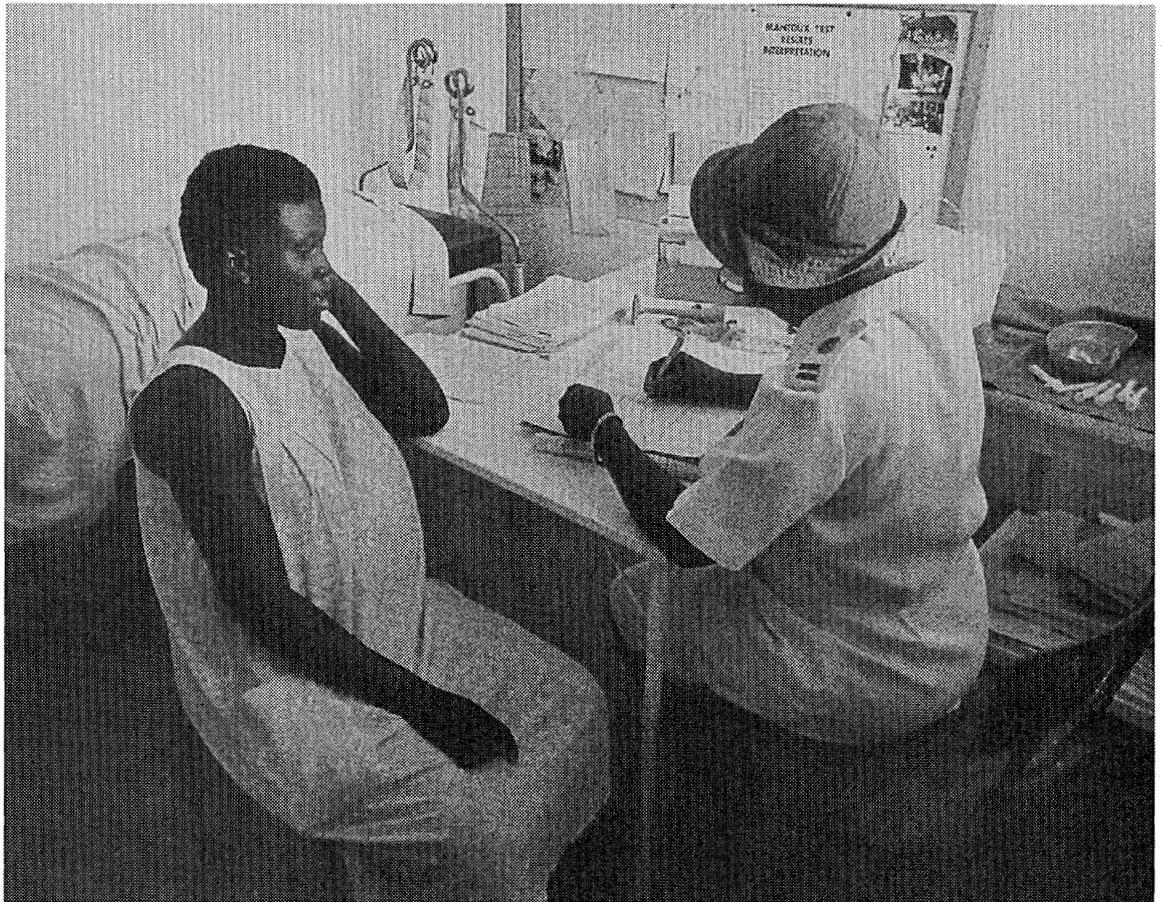
In a review of STD risk assessment studies conducted in Africa, Susan Chen and her colleagues at FHI concluded that among married, monogamous women, the husband's behavior may be a better indicator

of the woman's risk than is the woman's behavior. A husband may bring an infection to his wife from extra-marital sex. For the husband's behavior to be useful in the risk assessment, a woman must be able to report her partner's behavior accurately.⁶

Research in Kenya among pregnant women at an urban clinic found risk assessment generally performed poorly in detecting gonorrhea and chlamydial cervicitis.⁷ "The women were at risk primarily because of their partners' behavior, and it was very difficult to get accurate information about the partners," explains Dr. Stephen Moses of the collaborative research program of the University of Nairobi Medical School and the University of Manitoba, Canada, which conducted the study.

A recent study at a Jamaican family planning clinic also found that a risk assessment approach did not detect STDs accurately. The most predictive measure of STD infection was the LED test.⁸ Many of the infected women in Jamaica had no symptoms. "Identifying cervical infection is very difficult among asymptomatic women," says Behets of UNC, who worked on the study. "At this point, we have a very limited array of tools. It's frustrating." FHI coordinated the study, working with the Jamaica Ministry of Health.

The USAID Technical Guidance/Competence Working Group is currently developing guidelines for adapting an STD risk assessment tool to local situations, using many of the variables evaluated in these studies.



IMPACT VISUALS/ BRUCE PATON

A RISK ASSESSMENT INVOLVES QUESTIONS ABOUT MANY FACTORS, INCLUDING RECENT SEXUAL PARTNERS AND OTHER SOCIAL OR BEHAVIOR CIRCUMSTANCES THAT ARE CORRELATED WITH STD RISKS.

> CONTRACEPTIVE CHOICE

With the sharp increase of HIV and other STDs in developing countries, evaluating the risk of STD infection among family planning clients is becoming more common. "It's a subtle but important shift for a provider to make," says Dr. Cates of FHI. "Instead of thinking of themselves as family planning providers, it may be time to think of themselves as reproductive health providers. Using a risk assessment approach can help incorporate STD thinking into contraceptive choice."

In recent years, basic STD/HIV prevention messages have become common at a growing number of family planning clinics. Some programs have taken this a step further, using risk assessments as a part of the contraceptive counseling process.

In Brazil, a 1994 study showed that many clients perceived themselves at possible risk for STD infection.⁹ The Sociedade Civil Bem-estar Familiar no

Brasil (BEMFAM), the International Planned Parenthood Federation (IPPF) affiliate in Brazil, then trained its staff in STD prevention.

"All women who come to the clinic are now invited to participate in a group discussion, where we talk about STD prevention," says Rita Badiani, BEMFAM's planning coordinator. "The group leader explains some of the symptoms of STDs, encouraging those with symptoms to seek services. The goal is to increase awareness of STD risk and to empower women to discuss sexual matters with partners and negotiate safer sexual practice." After this counseling session, women may consider themselves in the "at-risk" group. This group receives a clinical exam, which includes a risk assessment questionnaire.

In Kenya, following a training program for providers from about 200 private sector family planning clinics, many of these clinics now use a one-page behavior risk assessment

form in counseling clients about contraception and HIV/AIDS. They ask if a client has had an STD in the last three months, engaged in unprotected sex with more than one partner in the last three months, and other questions.

"The providers classify the clients as high risk or low risk depending on their answers," explains Charles Omondi, who manages this project at the Family Planning Private Sector (FPPS) Programme, which works with the clinics. The classification helps guide the provider and the client with method choice.

While helpful, the risk assessment system also has a potential weakness, cautions Omondi, in that contraceptive decisions might be viewed more as something to be prescribed by providers, rather than chosen by clients. "It could give too much power to the service provider and less autonomy to the woman" as it may discourage choice, Omondi says.

Contraceptive choice is complicated by the dual needs of protecting against both unwanted pregnancy and STDs. Providers must explain that only barrier contraceptive methods can prevent STD transmission, and that latex condoms are the most effective method of protection. If a couple uses condoms consistently and correctly, they are highly effective for both purposes.

Many family planning programs now recommend that a woman concerned about STD infection should use latex condoms in addition to a modern contraceptive method. However, a recent review of research has found that condoms may be used less consistently when recommended for STD prevention, together with a very effective contraceptive.¹⁰ Hence, this approach to "dual-method" use may not be effective at preventing disease among some clients.

STD risk assessment affects other contraceptive choices. "Many providers are not screening women properly for possible STD infection before inserting an IUD," says Dr. Mark Barone, medical associate at AVSC International. AVSC is participating in a project funded by the Mellon Foundation to analyze how STD issues affect IUD use. "The IUD is a very good method that is very popular in developing countries. It is inex-

pensive, very effective, has few side effects, and the woman does not have to remember anything to use it properly."

If a woman has a reproductive tract infection when she gets an IUD, however, the insertion process could cause the infection to ascend into the cervical canal, possibly leading to pelvic inflammatory disease. When considering an IUD insertion, a provider should examine the client for lower abdominal or cervical motion tenderness, and look at the cervix for inflammation or mucopus. If such signs are present, "then do not insert an IUD," says Dr. Islam of WHO. "Treat for gonorrhea and chlamydia, or make sure the client is treated."

PRACTICAL CONSIDERATIONS

A consideration for any clinic integrating STD services with other health care is cost. Compared with other options for STD treatment services, the cost of risk assessment appears to be favorable. The Tanzania study among rural antenatal clinics reported that combining the WHO syndromic approach for vaginal discharge with a risk assessment approach among those attending antenatal and maternal and child health clinics "may currently represent the most cost-effective approach" to diagnosing and treating gonorrhea and chlamydial infection.¹¹

While such cost estimates are promising, providers are not used to treating an infection based on signs and symptoms, much less on a risk assessment score. "In our experience, it is not enough to train providers just once on using a syndrome approach," says Behets. "It goes against all of their training, which is to use a microscope to find the cause of the infection. You have to follow up with repeated messages. Changing behaviors of providers is as difficult, if not more so, than changing the behavior patterns of patients."

The Kenya training project among the private sector clinics did not initially include supervisors, which reduced the ability of the clinic staff trainees to introduce syndromic management. "Their supervisors were not convinced of the need for this approach," says Janet Hayman of FHI's AIDSCAP Project, which funded the training. The project added supervisors to the training and has now trained more than 60 supervisors.

Providers can also be trained to determine if a woman is asymptomatic whether or not she has signs of infection. If she does have signs, a risk assessment is more useful. Women often do not realize that a symptom of a reproductive tract infection is something out of the ordinary, explains Dr. Islami. "For all women coming for family planning services, providers could look at the vulva for ulcers, discharge, or bubo, and determine quickly if they are really asymptomatic or not, and act accordingly."

—William R. Finger

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Emergency Contraception As a Backup Method

OCs can be given to barrier method users in advance as an emergency contraceptive option, if ever needed.

Couples who use male latex condoms correctly and consistently are protected from both pregnancy and sexually transmitted diseases (STDs). However, because condoms are applied by the user at the time of intercourse, they are generally not as effective as contraceptives such as hormonal methods and intrauterine devices, which are not coitus-related.

To help condom users prevent an unplanned pregnancy, some health officials recommend emergency contraception (EC) as a backup method of family planning. EC, in the form of oral contraceptives, can be given to condom users (or users of other barrier methods, such as diaphragms or spermicides) as a precaution, to be used in the event of unprotected intercourse or method failure. Such measures would likely improve access to and use of emergency contraception, experts say.

"A user of the condom, diaphragm, sponge or spermicide could be given the correct number of pills for emergency contraception along with instructions for their use," say draft guidelines developed for family planning providers by the Technical Guidance/Competence Working Group, an international advisory panel organized by the U.S. Agency for International Development (USAID). "Having emergency contra-

ception readily available in cases of slippage/breakage/non-use of barriers would decrease the risk of unintended pregnancy."¹

At a 1995 meeting of international experts, sponsored by the Rockefeller Foundation and held in Bellagio, Italy, a consensus statement on emergency contraception recommended that women who choose barrier methods or periodic abstinence as their contraceptive method "should be informed about and, when appropriate, provided with emergency contraceptives for future use."²

Using condoms as a primary means of contraception and emergency contraceptive pills (ECPs) as a backup is a new approach to "dual-method" use. Previously, many providers have recommended that couples use pills and condoms together — but with pills as the primary means of pregnancy prevention and condoms for STD prevention.

Several studies are under way to determine the effect of giving ECPs to condom users prior to immediate need.³ In one, FHI plans research on the probability of pregnancy among condom users who receive counseling only, compared with condom users who receive counseling and the emergency contraceptive method known as the Yuzpe regimen (two elevated doses of combined oral contraceptives). The study will follow two groups of women for three months, examining the consistency of condom use, frequency of ECP use and method acceptability.

IMPACT VISUALS/SEAN SPRAGUE



A THAI POSTER PROMOTES ORAL CONTRACEPTIVES.

"Many people are beginning to recommend that all barrier method users should be provided with emergency contraceptive pills in advance, to use in case they fail to use the method or in case the method fails — for example, if the condom breaks," says Dr. Elizabeth Raymond of FHI's clinical trials division. "However, some concern exists that having ECPs at home could lead some women to use their barrier method less consistently, possibly increasing their risk of pregnancy and STDs. The study will evaluate and compare use of condoms in the two groups."

The World Health Organization (WHO) is also conducting a study of 3,000 people in China, comparing those who use male condoms and those who use condoms with progestin-only pills containing levonorgestrel as a backup. The Dean Terrace Family Planning Centre in Edinburgh, Scotland is conducting a similar study of approximately 1,000 women whose partners use condoms.

In South Africa, ECPs are being provided as backup contraception in three provinces — Gauteng, North-West and Northern Province — as part of a study to introduce dual-method use. This study, conducted by the Baragwanath Hospital in Soweto with funding from WHO, will provide information on user attitudes and practices, plus service delivery requirements. South Africa recently approved sales of the emergency contraceptive pill PC4, also marketed as Tetragynon.

In addition to research on service delivery, studies also are planned to learn more about the mechanisms of action of ECPs, including a study by FHI. Currently, scientists believe the pills may work by inhibiting ovulation, making the uterine lining less receptive to implantation of the egg, and altering the speed at which the egg passes through the fallopian tubes.⁴

Providing ECPs in advance of need could be especially beneficial to condom users, some experts say. A study in New South Wales, Australia, found that 22 percent of women requesting an abortion had been using condoms at the time of conception. Many women reported a broken or slipped condom, caused by incorrect use.⁵ A separate study of women seeking abortion in England found that, of the 309 clients who became pregnant while using condoms,

45 of them recognized condom failure, but only 20 people attempted to use emergency contraception.⁶

According to the USAID working group, providers who give clients ECPs prior to unprotected intercourse should counsel clients about:

- how and when to use ECPs
- the potential complications resulting from ECP use (nausea, vomiting, irregular uterine bleeding, breast tenderness)
- problems for which a woman should seek further treatment (lower abdominal pain, absence of menses three weeks or more after ECPs are taken)
- what to do in case of ECP failure (virtually no risk for fetal development, but a woman may need referrals for follow-up care).

Certain combined oral contraceptives, given in higher-than-usual doses, can be used as emergency contraceptive pills. The Yuzpe method requires a woman to take an initial dose containing 100 micrograms (mcg) of ethinyl estradiol and 1 milligram (mg) of norgestrel or 100 mcg of ethinyl estradiol and 0.5 mg of levonorgestrel within 72 hours of unprotected sex. This should be followed by a second dose 12 hours later. In 1996, an advisory panel of the U.S. Food and Drug Administration concluded that the following dosages of six brands were known to work safely and effectively: two tablets per dose of the brand Ovral or four pills per dose of the brands Lo/Ovral, Nordette, Levlen, Tri-Levlen or Triphasil (yellow active pills only).

Emergency contraceptive pills are safe for use by any woman who has had unprotected sexual intercourse, including women who cannot routinely use the pill due to health problems, such as cardiovascular disease.⁷ Laboratory tests, Pap smears, blood pressure and breast exams are not necessary.⁸

Certain progestin-only pills also may be used as an emergency contraceptive. Additional studies are under way to determine effectiveness. Clients should take one dose, containing 0.75 mg of levonorgestrel within 48 hours of unprotected intercourse, followed by a second dose 12 hours later.

Copper IUDs, inserted within five days of unprotected intercourse, also can be used as an emergency contraceptive. However, because IUDs are not recommended for use

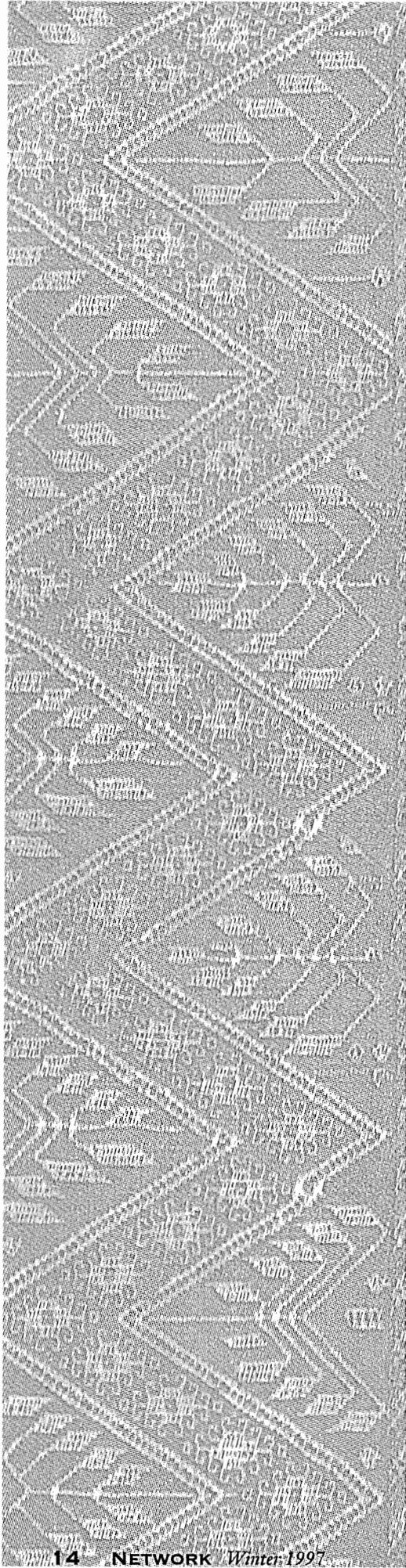
by couples at risk for STDs, this method would not be ideal for couples using condoms for STD protection.

Emergency contraception can prevent nearly 75 percent of the pregnancies that would be expected if emergency contraception had not been used.⁹ However, emergency contraception does not protect against STDs. For couples concerned about transmission of STDs following unprotected intercourse, options are limited. Combinations of antibiotics, given after unprotected sexual intercourse, may reduce a woman's risk of infection from some bacterial STDs, and genital washing and medications such as Protargol have shown some ability to prevent STDs among men. However, emergency treatment of STDs typically is recommended for specific situations, such as treating rape victims, and not for general use. No postcoital methods can prevent transmission of viral STDs, such as HIV, the virus that causes AIDS.

— Barbara Barnett

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Experimental HIV Drugs May Improve Prevention

Condom use remains crucial, despite promising vaccine and drug candidates that may enhance prevention.

As the AIDS epidemic nears the end of its second decade, public health experts are sharpening strategies for fighting this deadly disease. They are honing new technologies to prevent infection, including vaccines, drugs and microbicides. Meanwhile, recent findings on how HIV behaves soon after infection may point to improved prevention strategies.

"Family planning managers need to emphasize condoms and continue to build on other proven prevention efforts," says Dr. Willard Cates Jr., FHI senior vice-president of biomedical affairs. In addition to promoting condom use, these proven interventions include preventing other sexually transmitted diseases (STDs), since the presence of other STDs enhances HIV transmission, and counseling clients to reduce the number of sex partners.

Currently, such efforts are often blanketed across populations, an expensive approach. New research suggests that focusing on recently infected people, during the first weeks or months after they acquire HIV, could be an important consideration in prevention strategies.

This early infection period may be the biggest contributor to HIV transmission, says Dr. James S. Koopman, a professor of epidemiology at the University of Michigan. Viral levels are high, AIDS has not yet weak-

ened its new victims, and these recent carriers are likely to be having sex with other high-risk partners. These conditions can lead to an explosion of new infections.¹

If people identify their infections early and help public health officials trace their recent sex partners, it can point to infection "hot spots." Then transmission can be curtailed by urging people within these groups to reduce high-risk behavior.

However, doubts remain about how important the early infection period is for HIV transmission through sex. While HIV levels in the blood are clearly higher soon after exposure, viral levels in vaginal or seminal fluids may not be unusually high. Data have not yet clearly shown that people with HIV are more infectious during this period, researchers say.

In spite of these caveats, focusing on the early infection period may still be worthwhile. "Even if it turns out that people are equally infectious over time, it is still in our best interest to catch them early," says Dr. Margaret A. Chesney, co-director of the Center for AIDS Prevention Studies at the University of California at San Francisco (UCSF). "Then we can help them change their behavior so they do not infect others. We can frame being safe and not transmitting the virus as a way of caring for others."

CONDOMS FOR LIFE?

Tailoring messages to prevent transmission during the early infection period may also encourage more people to practice safer sex. FHI's Dr. Cates and other experts suggest emphasizing condom use with non-primary sex partners and during the first three months of a new relationship. Reinforcing messages can be given later.²

"When individuals hear 'Wear condoms for life,' they say 'Not me. I cannot even think of that,'" Dr. Cates says. "But if you say 'Wear condoms for a short period, then get tested,' they may build a habit that continues."

Dr. Cates cautions that such a theoretical approach has not yet been rigorously tested. Moreover, it may result in adverse consequences, such as giving people a false sense of security, he says. However, he says, new ways to encourage increased condom use should be tried and evaluated.

Another approach to prevention offers people at risk of infection a series of choices to fit their own circumstances. The New York State Department of Health suggests these options (in order of preference) for women at risk of HIV: use a latex male condom or female condom with spermicide; use a latex male condom or female condom without spermicide; use a diaphragm with spermicide; or, as a last resort, use a spermicide alone.³

Whatever the message, counseling for HIV-positive people must be culturally sensitive and protect individual rights, says Dr. Chesney of UCSF.

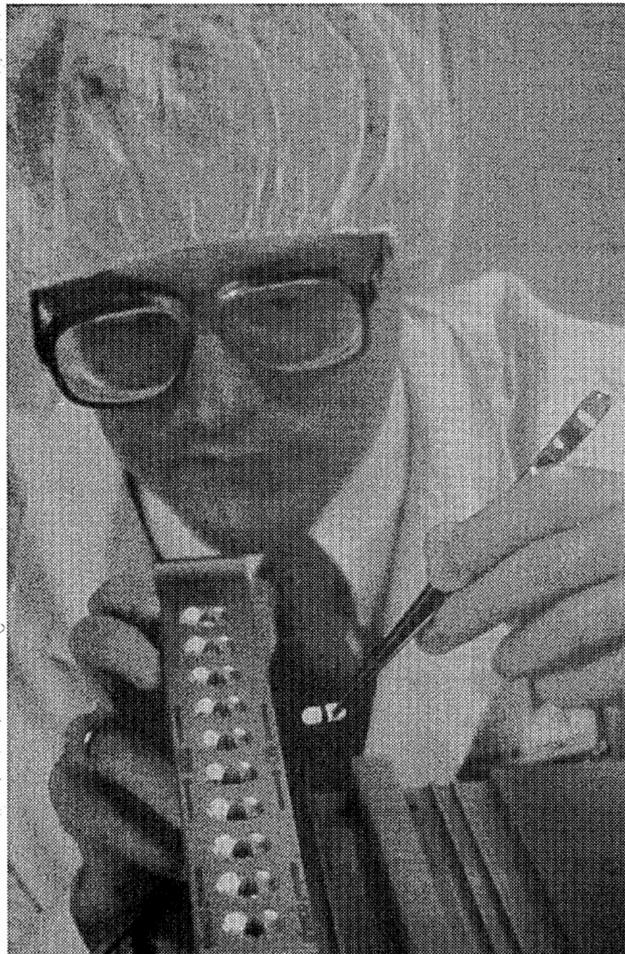
"Once they have been notified they are HIV-positive, people need to be assisted in deciding how to disclose this to others and how to access care," she says.

EARLY TREATMENT

In addition to improving ways to prevent transmission, research is seeking better treatment for those who do become infected. Scientists once thought that HIV

entered the body and, soon after, became dormant until AIDS developed years later. Recent research shows that the virus follows a different pattern of invasion. First, HIV infects immune system cells, which carry it to the lymph nodes. There, viruses establish base camps, churning out billions of copies of themselves daily.

GLAXO WELLCOME



GLAXO WELLCOME RESEARCH PHARMACIST EXAMINES ZIDOVUDINE (AZT) CAPSULES, A DRUG USED TO TREAT HIV INFECTIONS.

Eventually, the immune system fights back. It produces antibodies and uses other defenses to bring viral levels down to an equilibrium, or "set point." The higher the viral load at this point, the faster the disease will progress. Thus, if drug treatment can be offered early, it should lower the set point and prolong life.

The main obstacle to treating HIV-positive people soon after infection is that many do not know they carry the virus. This lack of knowledge is due to viral biology, available testing methods for infection and other conditions.

Because HIV often exists in the body for a long time without symptoms, infection may not become apparent until diseases associated with AIDS develop. In the meantime, HIV-infected people pass the virus to their sex partners unintentionally.

In addition, most HIV tests detect antibodies, not viruses. These tests may not register positive for up to six months after a person becomes infected.

HIV testing is not available in many parts of the world. Even in countries where HIV tests are free and anonymous, some people who fear they may have been infected will choose not to be tested. They may make the choice because of the stigma associated with AIDS, or because the disease has no cure and treatment is expensive but not always very effective.

New advances may help to dismantle these roadblocks. Recently, researchers have noticed that many people exposed to HIV suffer an acute illness similar to mononucleosis within two to six weeks after infection.⁴ Rashes on the upper part of the body, ulcers in the mouth or on the genitals, gastrointestinal distress, or even some AIDS-related disorders can develop, making early diagnosis possible.

Other scientists are working on tests that could accurately identify people with early HIV infections sooner, says Dr. Robert Janssen, acting director of the HIV/AIDS prevention-surveillance and epidemiology division of the U.S. Centers for Disease Control and Prevention (CDC). These new tests may be easier to use in the developing world.

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VAGINAL INFECTIONS

Contraceptive considerations

- Since some cases are transmitted sexually, consistent and correct use of latex condoms may provide protection.
- Women with vaginal infections should be successfully treated before they use IUDs.

Bacterial Vaginosis

Worldwide, the most common vaginal infections are bacterial vaginosis, caused by anaerobic bacteria including *Gardnerella vaginalis*; trichomoniasis, a protozoan infection caused by *Trichomonas vaginalis*; and candidiasis (thrush), a fungal infection caused by *Candida albicans*.

Bacterial vaginosis symptoms may include a bad smelling vaginal discharge, although a large number of infected women do not have (or

Trichomoniasis

recognize) symptoms. Trichomoniasis may result in foamy, yellowish vaginal discharge, itching or discomfort. Candidiasis may show as a thick, white discharge with itching and swelling. Symptoms alone are unreliable predictors of the specific vaginal organisms.

Candidiasis

Treatment — All are treatable with antibiotics or other drugs.

BACTERIAL STDs

Contraceptive considerations

- When used consistently and correctly, latex condoms give substantial protection.
- Spermicides and diaphragms protect against gonorrhea and chlamydia.
- Female condom and cervical cap may protect against some STDs, but have not been adequately studied.
- No STD protection occurs from non-barrier methods, including hormonal contraceptives (the pill, DMPA and Norplant), intrauterine devices (IUDs), sterilization or natural family planning methods.
- Hormonal contraceptives may be associated with increased risk of chlamydia, but decreased risk of symptomatic pelvic inflammatory disease (PID).
- Women with bacterial vaginal and cervical infections should be successfully treated before they use IUDs.

Chancroid

Chancroid is caused by the bacterium *Haemophilus ducreyi*, and is transmitted sexually. Chancroid is a common cause of genital ulcers in tropical areas.

Symptoms — Sores develop that are painful and tender when touched. Glands in the area of infection typically are swollen. Genital or oral areas are the most common infection sites.

Chlamydia

Chlamydial infection is caused by *Chlamydia trachomatis*, and is transmitted sexually. The bacteria can infect urethra, cervix, or eyes. In women, chlamydia can lead to sterility, pregnancy complications or can infect infants during delivery.

Symptoms — Most people are infected without having symptoms (asymptomatic). A sparse, clear discharge from the urethra, redness and irritation are common symptoms. Without treatment, an infection may last years.

Gonorrhea

Gonorrhea is caused by *Neisseria gonorrhoeae*, and is transmitted sexually. The bacteria can infect genitals, throat, eyes or rectum. In men and women, gonorrhea can lead to sterility. Women can infect their infants during delivery.

Symptoms — Some people may be infected without having symptoms (asymptomatic). In men, a yellow discharge from the urethra, painful urination and blood in urine may result. Symptoms among women include redness on the cervix, vaginal discharge and pelvic pain.

Syphilis

Syphilis is caused by the bacterium *Treponema pallidum*, and is transmitted sexually or from contaminated blood. Mothers can pass the disease to infants during pregnancy.

Symptoms — Sores develop, initially at the places where bacteria entered the body such as genital or oral areas, and later bacteria enter the blood stream. Flu-like symptoms (fever and swollen glands), rash, and bumps on genitals are among symptoms from this spread. Heart disease, neurological damage and other complications can result if untreated.

Treatment — Can be cured with antibiotics. The presence of bacterial STDs increases the risk of HIV transmission.

Contraceptive considerations

- When used consistently and correctly, latex male condoms give substantial protection. Other barrier methods (female condom, spermicides, sponge and diaphragm) have not been adequately studied.
- No STD protection occurs from other methods, including hormonal contraceptives (the pill, DMPA and Norplant), intrauterine devices (IUDs), sterilization or natural family planning methods.

AIDS (HIV)

Human immunodeficiency virus (HIV) leads to severe depression of the immune system, resulting in opportunistic infections called “acquired immunodeficiency syndrome,” or AIDS. HIV is transmitted by an infected person through semen, vaginal fluids, breast milk or blood.

Symptoms — In the first few months, HIV-infected people may experience fever, chills or similar signs. AIDS, which is actually complications from diseases that occur after an HIV-infected person’s immunity is weakened by the virus, typically occurs years after infection. AIDS is nearly always fatal.

Treatment — Several drug treatments show promise in reducing the level of HIV in blood and semen, reducing HIV related symptoms and delaying the onset of AIDS. These expensive treatments generally are not available in developing countries.

Herpes Simplex (HSV)

Herpes has two types. Type I generally appears as cold sores on the lips, while Type II is often found as sores on genitalia. The two types, however, can infect any mucous membranes. Infected people may experience outbreaks of sores several times a year, typically for about a week during each outbreak. Some people experience only a single episode or no episode at all.

Symptoms — Most HSV infections are asymptomatic. Herpes can appear as sores or blisters on the genitalia, anus or mouth. In serious cases, it can infect a person’s eyes. A burning, itching sensation with redness occurs initially, followed in a day or so by blisters. The blisters recede and disappear with time.

Treatment — The virus remains latent in the body between outbreaks and cannot be cured. Herpes remains in the infected person’s body for life. Drugs are available to curtail the outbreak of sores and reduce pain. Herpes increases the risk of acquiring HIV, since sores make it easier for the AIDS virus to enter the body.

Human Papilloma (HPV)

Human papilloma viruses (HPV), or genital warts, are a family of viruses that cause warts in the mouth, throat, genitalia or anus. While painless and often small, some people experience large warts that can cause problems, such as blockage of the urethra or the larynx in infants. The virus is the main cause of cancers of the cervix, penis and anus.

Symptoms — Warts grow in the mouth, throat, genitalia or anus. They are bumpy, fleshy growths that are painless. The HPV subtypes causing external warts are usually not those associated with cancers.

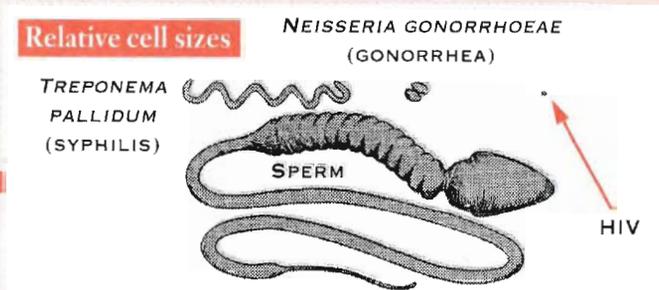
Treatment — Warts can be removed (by burning, freezing or with chemicals), but may recur since the latent virus remains in the body. Annual Pap smears are indicated to screen for cervical cancer.

Hepatitis B (HBV)

Hepatitis B (HBV) causes liver damage and may be transmitted sexually. The virus is also transmitted by contaminated blood products or contaminated syringes. HBV is found in bodily fluids, including semen and vaginal secretions.

Symptoms — Nausea, stomach pain, loss of appetite and headaches are initial symptoms. Swollen glands and liver damage occur in later stages, and a person’s eyes and skin turn yellow. In rare instances, some people die from severe damage to the liver. Some infected people have episodes of infection for life.

Treatment — Ample rest helps people recover from acute disease. A vaccine is available and should be strongly encouraged.



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Experimental HIV Drugs

Continued from page 15

Also, new treatment regimens may make early HIV testing less discouraging. For example, combination therapy uses two or more drugs to strike the virus at different points in its life cycle, reducing HIV to very low levels in the body while also making it more difficult for the virus to develop drug resistance. Such treatment may prolong life and reduce infectiousness, a crucial step in slowing the epidemic. In developing countries, however, this expensive therapy is not expected to become widely available.

MICROBICIDES

While early intervention may slow the AIDS epidemic within specific populations, vaccines, microbicides and other drugs are being added to the arsenal for HIV prevention in individuals. Most are years away from becoming widely available, but antiviral compounds already offer hope to pregnant HIV-infected women (see article, page 29).

Currently, the most promising approach uses zidovudine (AZT) in a prescribed regimen to help pregnant women prevent HIV transmission to their developing fetuses. Researchers have also tried washing women's birth canals with the microbicide chlorhexidine during labor, but the treatment did not lower HIV transmission rates, except in women whose membranes ruptured more than four hours before delivery.⁵

Despite the disappointment with chlorhexidine in the perinatal trial, other microbicides are being explored for HIV prevention. They would be appealing be-

cause women would have better control over initiating their own protection, whereas male condoms require a man's cooperation.

Microbicides can theoretically prevent HIV infection by killing or inactivating the virus, by preventing its entry into tissues, or by preventing viral replication.⁶ While many microbicides are being tested, new ones probably will not be available on the market for at least five years, says Christiana Coggins, a staff associate at the New York-based Population Council.

Currently, the main candidate microbicide is N-9, a spermicide that potentially prevents gonorrhea and chlamydia. Four U.S. Food and Drug Administration (FDA)

advisory committees recently voted that the agency should consider calling for label changes to reflect the spermicide's effectiveness against these sexually transmitted diseases (STDs). It is not clear whether N-9 prevents HIV transmission directly, but concurrent STD infections increase transmission of the virus, so preventing them could reduce its transmission.

FHI researcher Ron Roddy is examining whether N-9 blocks HIV transmission directly in a study of 1,300 commercial sex workers in Cameroon. Half of the women were given vaginal contraceptive film contain-

ing N-9, while the other half were given placebo film. Both groups received condoms and were followed for at least one year.

Their rates of HIV infection will be compared, and the results should be available this year. Other trials are being done with Advantage-24, an N-9 gel that coats the vagina and cervix and theoretically works for 24 hours.

One concern about N-9 is that it is a detergent. When used frequently, it causes vaginal irritation that could facilitate HIV transmission. The N-9 studies include vaginal exams to see whether such irritation occurs.

Non-detergent microbicides might also prevent HIV transmission. In the United States, the National Institutes of Health is testing compounds that buffer vaginal pH. Future tests may expand to India, Thailand, Zimbabwe and Malawi.

The vagina usually has an acidic pH of between 4 and 5, which inactivates or retards viral and bacterial activity. When semen is present, however, the pH increases to a neutral 7, a state much more amenable to microbes. The acid-buffering microbicides lower the pH even in the presence of semen. This shift may block HIV transmission.

While many microbicide candidates are also spermicides, the Population Council is testing compounds, including sulfated polymers, that allow sperm to survive. "These would be useful for women whose partners are HIV-positive and who want to conceive," says Coggins of the Population Council. "They would also be suitable for women who are in a part of the world where it is not culturally acceptable to contracept."

VACCINES

Several vaccines are in different stages of testing for HIV prevention. Some of the trials will be conducted within the HIV Network for Prevention Trials (HIVNET), a system of clinical trial sites to evaluate promising HIV prevention interventions, including vaccines. FHI manages the international arm of HIVNET.

Developing a vaccine is particularly challenging for several reasons, says Dr. José Esparza, vaccine development advisor for the Joint United Nations Programme on HIV/AIDS (UNAIDS). First, researchers do not yet know which immune system weapons protect best against HIV. Second, the virus consists of many strains, and scientists are uncertain whether a vaccine made against one will work against another. Third, research results from animal studies may not correspond with how a vaccine would perform among humans.



COMBINATION THERAPY USES TWO OR MORE DRUGS, INCLUDING ZIDOVUDINE (AZT), TO REDUCE HIV LEVELS WHILE MAKING IT MORE DIFFICULT FOR THE VIRUS TO DEVELOP DRUG RESISTANCE.

Most of the vaccines being tested are made against strains found in the United States and Europe. "We have to increase our efforts in developing countries," Dr. Esparza says. "There is a sense of urgency."

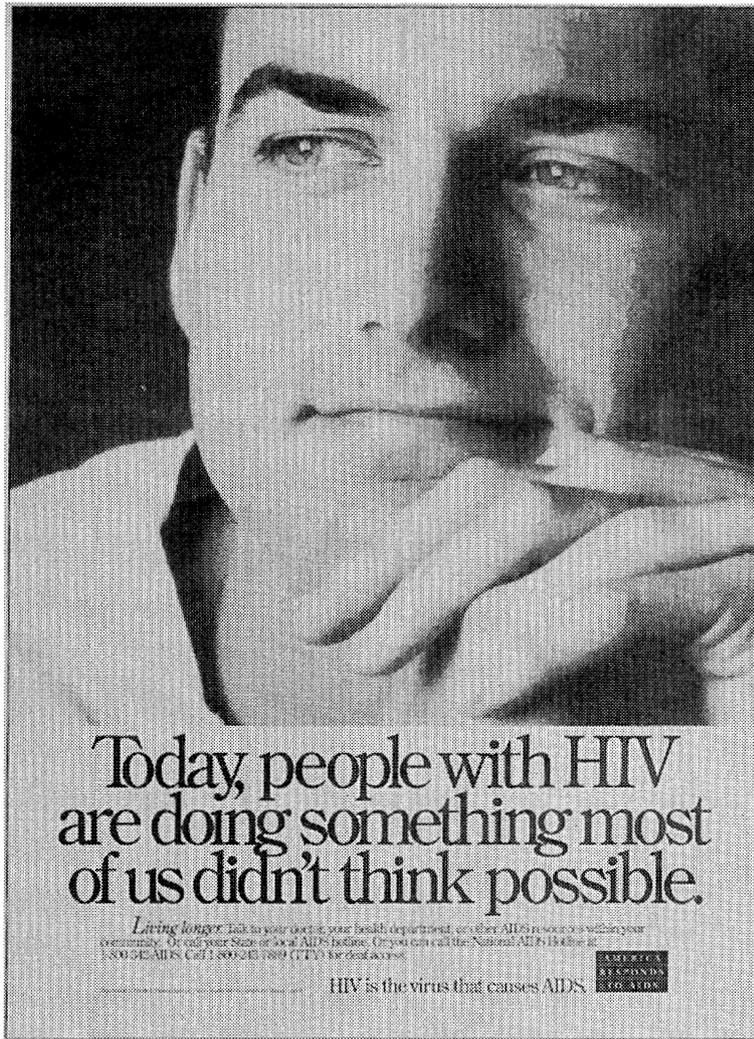
One of the most promising vaccine strategies, known as ALVAC-HIV/gp-120, establishes two lines of defense against the virus, says Dr. Zeda Rosenberg, a senior scientist for adult prevention research in the AIDS division of the National Institute of Allergy and Infectious Diseases. The first line is vaccination with canarypox virus, which enters human cells but does not reproduce well there. The virus contains HIV genes whose protein products prime the immune system to fight HIV-infected cells. The second line of defense is a vaccination with gp-120, an inactive portion of HIV's protein coat. It causes the immune system to produce antibodies aimed at identifying and attacking HIV.

Plans are underway in Uganda to test the ALVAC-HIV canarypox vaccine alone. Researchers from Case-Western Reserve University in the United States hope to see if a vaccine made from subtype B of HIV (the predominant strain in the U.S. and Europe) will stimulate an immune response among populations primarily exposed to subtypes A and C (the dominant strains in Africa).

Other vaccines under development contain gp-120 or other viral coat proteins alone, or DNA from HIV. These vaccines are in phase I or phase II trials to study their safety and ability to induce virus-specific immune responses. However, none has moved to large-scale clinical trials. Candi-

date vaccines made with whole, inactivated HIV or with altered, live HIV are being tested in animals.

Preventing HIV transmission completely is the goal of vaccine development, but some researchers have suggested that a vaccine decreasing viral infectiousness would be just as useful, on a population-wide scale. For the vaccinated individual, this approach might also delay or prevent onset of AIDS even if the person becomes infected with HIV.



Today, people with HIV are doing something most of us didn't think possible.

Living longer. Talk to your doctor, your health department, or other AIDS service organizations. Or call your State or local AIDS hotline. Or you can call the National AIDS Hotline at 1-800-458-5231. Call 1-800-251-7899 (TDD) for deaf access.

HIV is the virus that causes AIDS.

AMERICAN SOCIETY OF HUMAN RIGHTS

A U.S. POSTER ENCOURAGES HIV-INFECTED PEOPLE TO SEEK TREATMENT.

"If you have a vaccine that causes an immune response early [thus reducing viral levels], that will stop transmission," says Koopman of the University of Michigan. "Vaccines can stop the epidemic. Even if they do not prevent an individual from getting infected, they may prevent him or her from infecting others."

— Carol Lynn Blaney

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Serving Young Adults Requires Creativity

Adolescents face high risks for pregnancy or STDs, as well as barriers to reproductive health services.

Sexually active young adults are seldom well-informed about their contraceptive choices or the risks they face in acquiring a sexually transmitted disease (STD). They are often reluctant to go to clinics for services and may even be refused services or treated rudely if they do. Inconvenient hours or location and unaffordable costs may also discourage them from seeking help.

Yet compared with older men and women, adolescents are more likely to change partners often or have partners who have multiple partners. In many countries, adolescents have high rates of unwanted pregnancies and STDs.¹ In the United States, women from 15 to 19 years old have the highest incidence of chlamydia and gonorrhea of any age group,² while in Kenya, one study among 205 adolescent school students, ages 13 to 15, found that one in every

three had gonorrhea.³ Worldwide, young people under age 25 account for one-half of all HIV infections.⁴

The age of puberty is falling worldwide, partly due to better nutrition,⁵ while the age at marriage in many countries is rising.⁶ These trends suggest that the opportunity for sexual activity prior to marriage is increasing.

Finding effective ways to serve youth is difficult, yet crucial. Experience shows that planning youth services may call for creative steps. For

YOUTH AT PLAY IN CHINA.



example, health professionals should involve parents, teachers, community leaders and youth themselves in developing strategies to serve young adults. Community workshops to explore attitudes about teenage sexuality and to discuss approaches for tailoring services to meet young people's needs may be useful.

Convenient ways for young adults to obtain latex condoms should be considered, including vending machines or distribution by peer educators. In educating young adults about pregnancy and STDs, role playing or theatrical skits have been used successfully. Even the physical appearance of a clinic may play a role, since an appealing environment and adequate privacy may help to attract young clients.

SEX EDUCATION

Contraceptive use among adolescents is generally low. Unmarried young women, who face social disapproval of their sexual activity, are unlikely to get and use contraceptives. Among sexually active unmarried teenage women in Zimbabwe, for example, about two of every five become pregnant before marriage.⁷

Youth generally do not know what contraceptive choices are available, or how to obtain them. In Senegal, a survey of 1,973 single and married women ages 15 to 24 and 936 single men ages 15 to 19 showed that the most prominent reasons given for not using contraception were that they did not know about contraceptive options or did not expect to have sex. About 80 percent of survey respondents incorrectly believed that oral contraceptives cause infertility.⁸ Similarly, in Mauritius, misperceptions were the most common reasons given by teenagers for not using condoms, including the mistaken belief that condoms were intended for married couples only.⁹

FHI researchers Karen Katz and Elizabeth Tolley, working with the Comité d'Etude sur les Femmes, la Famille et l'Environnement en Afrique (CEFFEVA) in Dakar, Senegal, identified lack of contraceptive services and health information as the two main factors contributing to unintended pregnancies among adolescents in the West African country. Better reproductive health services for young adults, they concluded, should include an expansion of sex education programs in schools.

Since community approval of sex education is vital, they suggested bringing parents and providers into the process. A workshop with family planning providers to explore community attitudes and build support is planned.

Parents may fear that sex education will hasten or encourage sexual activity, despite research that shows education may delay activity.¹⁰ In Zaire, a survey by the Population Council found that 75 percent of the 500 parents interviewed believed that teaching female teenagers about contraception would promote promiscuous sexual behavior.¹¹ However, a World Health Organization review of 19 studies found that offering sex education in school often delayed or decreased sexual activity and led to more contraceptive use.¹²

For young adults who are already sexually active, better education helps prevent STDs and unwanted pregnancies. In addition to informing youth about family planning choices, young adults should be taught to assess their risk of STD infection and to understand the relationship between various contraceptives and infection. Sexually active youth should be offered condoms or other barrier contraceptive methods to protect against STDs and counseled about how to negotiate risk reduction in a relationship.

Those who are at high risk should be urged to use condoms with every sexual encounter, and those who are infected with STDs must be treated and counseled about the importance of informing partners about their infection. Learning how to use a condom is difficult for people of all ages, but may be especially challenging for youth, who are less experienced with relationships and may be more embarrassed about discussing condom use with a partner.

EMBARRASSMENT

Many young adults are simply too embarrassed to seek family planning or STD treatment and prevention services. "Adolescents are reluctant to go to clinics because of cultural and social barriers and, even if they go, they are not well received, because providers don't want to give them what they need," says Christine Nare, president of CEFFEVA in Senegal. "From a social and cultural perspective, if a woman is not married, people believe that she should not have

sexual intercourse. If an unmarried young woman goes to a clinic to look for methods, it suggests that she is having sex. This is something girls generally do not want people to know, and they do not want people to see them going to a clinic."

Once at a clinic, young adults may be refused condoms, other contraceptives or even counseling. Some providers openly disapprove of a young client's sexual activity, and confidentiality may be lacking. In the Senegal project, 12 teenagers were hired to visit clinics to obtain contraceptive information while pretending to be regular clients. Of those who requested a contraceptive method, none of them received contraception.¹³ In some countries, although not Senegal, it is illegal for family planning providers to serve adolescents, or illegal to do so without parental consent.

Because of these barriers, nonjudgmental, specialty clinics that serve only youth may be necessary. Motivational media campaigns using clear, simple messages and positive images can inform youth where to get health services, as well as increase awareness about the risks of being sexually active and how to take preventive measures. Involvement of other young people as educators, coordinators or program developers may be effective.

In Haiti, the Youth Project of the Fondation de la Santé Reproductive et l'Education Familiale (FOSREF) operates a clinic specifically for young adults, targeting 15- to 24-year-olds. The youth clinic was established after a survey of teenagers attending FOSREF's clinics showed that young clients typically sought help only during an emergency, such as a need for emergency contraception after unprotected intercourse or treatment for an STD.

"If they didn't have a big fear [about their health], they wouldn't have come," says Dr. Fritz Moise, FOSREF director. "In Haiti, all school children wear school uniforms, and they knew that people would recognize them as students and know that their presence at the clinic meant they were having a sexual relationship. The big fear was that their parents might find out."

Research showing that Haitian youth had the highest risk of STDs and the highest rates of maternal mortality helped gain community support, says Dr. Moise, who convened a workshop of parents, school representatives, church officials and others. "Those people were afraid and surprised to



IMPACT VISUALS/ JULIO ETCHART

PRIMARY SCHOOL STUDENTS LEARN ABOUT AIDS IN A BRAZILIAN COMMUNITY THAT HAS A HIGH INCIDENCE OF HIV INFECTIONS.

know that young people were the most vulnerable to STDs and that clandestine abortion was the leading cause of death," he recalls. "The parents asked us to please do something." Schools invited Dr. Moise and colleagues to conduct focus groups with their students, and FOSREF gained support from the ministries of education and health in Haiti to provide family planning and STD prevention services specifically for teenagers.

"I believe the way we started with the parents, churches and school teachers — everyone recognized the problem and saw how big it was," says Dr. Moise. "We confirmed that there was a need. I think all young people's programs should start that way."

ACCESS TO CONDOMS

Access to contraceptives, especially to condoms, is often a problem among sexually active young adults. In Portland, OR, on the west coast of the United States, Project ACTION made condoms available to teenagers through vending machines. Vending machines were selected as the way to improve access based on focus group research, which showed that adolescents were most

often discouraged from buying condoms because of embarrassment, cost or inconvenient access to them.

About 240 vending machines were installed in night clubs, clothing stores, restaurants, college buildings and recreation centers — places frequented by young adults. The price per condom was kept low at U.S. 25 cents, about the cost of a telephone call. A private business has since purchased the vending machines and continues selling condoms at U.S. 25 cents.

Finding ways to involve businesses in STD prevention is part of a larger strategy, says Julie Convisser, campaign director for Project ACTION, sponsored by Population Services International, which coordinates condom campaigns in many countries. "The single reason our program succeeded is because we focused first and foremost on building community mobilization across society," she says. "Many people think health is separate from business, politics and ethnic or racial issues when, in fact, it is integral to it."

Before the vending machine project began, Project ACTION spent six months building community support, with frequent visits to business, religious and ethnic leaders, as well as to government agencies and non-government organizations that work with health or youth. With strong community backing, "safe sex" messages to young adults were frequently broadcast by local television and radio stations as public service announcements.

Based on interviews with more than 2,200 teenagers before and after the two-year Project ACTION campaign, condom use with casual partners increased substantially and the number of teenagers reporting sexual activity declined somewhat, from 82 percent to 75 percent at the project's conclusion.¹⁴

Another way to reach youth is with clinics that are conveniently located or have been designed to serve adolescents. In the Central African Republic city of Bangui, the *Projet d'Appui aux Jeunes pour une Sexualité Responsable (PAJESR)* operates an office in the same compound that houses a high school and is located near another large high school. Many teenagers congregate at the compound after school, and typically about a dozen of them visit the office daily.

"At first it was difficult to get youth there, and the ones who did show up were mainly boys," says Gaby Supe, program coordinator. "We did a lot of public relations and have managed to increase the ratio of girls to more than one-third."

The project has trained young people to work as peer educators and as puppeteers with a theater marionette group that performs for adolescents. Video messages about contraception and STDs have been made by the project and are shown locally.

In Haiti, Dr. Moise and colleagues are using similar strategies. The clinic that targets adolescents is at a location where many youths pass on their way to school. A large room near the entrance serves as both waiting room and gathering place for teenagers, who can watch educational videos and television, or listen to music, without using the clinic's services. In addition to films about STDs and teenage pregnancy, general entertainment films are shown.

Unlike Haitian clinics for older adults, where clients must register upon arrival, young adults do not sign in at the youth

clinic. "The way the youth clinic is organized, the young people come in and see television, young people talking, and posters," says Dr. Moise. "It is only when they cross a small corridor and go for something else that they see a nurse auxiliary. We do not even ask for their names until the teens leave the clinic. We know that some just come here to see what it is like."

Because of STD risks, condoms are made available to every teenager, even for young adults who are using another method. "We are always talking about condoms," Dr. Moise says, "even if they say they're monogamous." Dr. Moise's research on Haitian adolescents shows that young people, on average, change partners two to three times every year.

CONFRONTING DENIAL

In a United States farm community that has an unusually high prevalence of HIV infections, an AIDS prevention project encourages adolescents to confront their own denial about sexual risks. The project in Belle Glade, FL, called the Health Education AIDS Research Team (HEART), uses theatrical skits, games and other community events to help teenagers understand HIV risks.

One popular skit involves a teenage party in which some of the "guests" are STD symptoms, who pretend to be casual acquaintances and slip into the party uninvited. The skit is intended to show how STDs can slip into a person's body uninvited or unnoticed.

"It is hard for some people to see themselves as being at risk," says Henrietta Johnson, a field supervisor for HEART, which is funded by the American Foundation for AIDS Research with technical assistance from FHI. "It is not so much what you see in your partner, but the information you do not have, and you do not know about, that could put you at risk." In one game played by teenagers, everyone who knows one individual gathers around the person, illustrating that person's many relationships with other people. The game helps adolescents understand how any couple's relationship can easily follow a history of sexual

relationships with many other people. Other games and role playing deal with issues of trust and fear about asking a partner to wear a condom.

HEART conducted surveys of more than 500 teenagers before the project began in 1992, then again in 1994. The proportion of adolescents who reported having sexual intercourse decreased from 56 to 43 percent, and the proportion of teenage girls reporting no sexual partner during the previous month increased from 10 percent to 33 percent. Sexually active teenagers reporting they had ever used condoms or had used a condom at their last sexual encounter also increased.¹⁵

Other promising approaches for young adults include the Youth to Youth Project in Burkina Faso, which promotes reproductive health information and services to young people nationwide. Several reproductive health clinics have been established to serve adolescents with a range of reproductive health services, including STD screening and treatment, contraceptives and gynecological services.

Youth to Youth bases its services and campaign strategy on survey data collected on the sexual attitudes and behavior of 1,877 young adults. Teaching materials are designed by youth, youth are trained as

educators, and information about the program is channeled through youth peer networks.¹⁶

In Ethiopia, several AIDS prevention programs have managed to increase youth attendance at STD clinics. The Family Guidance Association of Ethiopia (FGAE), with technical and financial assistance from FHI's AIDSCAP Project and the Ministry of Health, has trained youth volunteers to give youth-to-youth educational sessions. Peer educators distribute free condoms to out-of-school teenagers and provide them with booklets and discussion groups about AIDS. Many experts feel that youth involvement may be the single most important feature of any successful public health campaign targeted at teenagers.

— Sarah Keller



PROJECT ACTION
CONDOM MACHINE.

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STDs, Pregnancies Affect Women's Health

Educating women about risks and how to voice their needs helps curtail STDs and pregnancy.

For women, sexual intercourse can lead to two major health consequences: pregnancy and sexually transmitted disease (STD). Because the two are so closely entwined, many clinic managers are encouraging staff to view family planning and STD services as two essential components of reproductive health programs — not as separate services with different goals.

Many family planning programs now offer a variety of STD prevention activities, including education about STD signs and symptoms; education about the effects of contraceptive choice on STD risks; counseling to help women improve communication skills so they are able to talk with their partners about sex; and education for couples on the relationship between sexual behaviors and STD risks.

In addition, family planning clinics are training staff to understand the social, economic and cultural factors that affect women's reproductive decision-making.

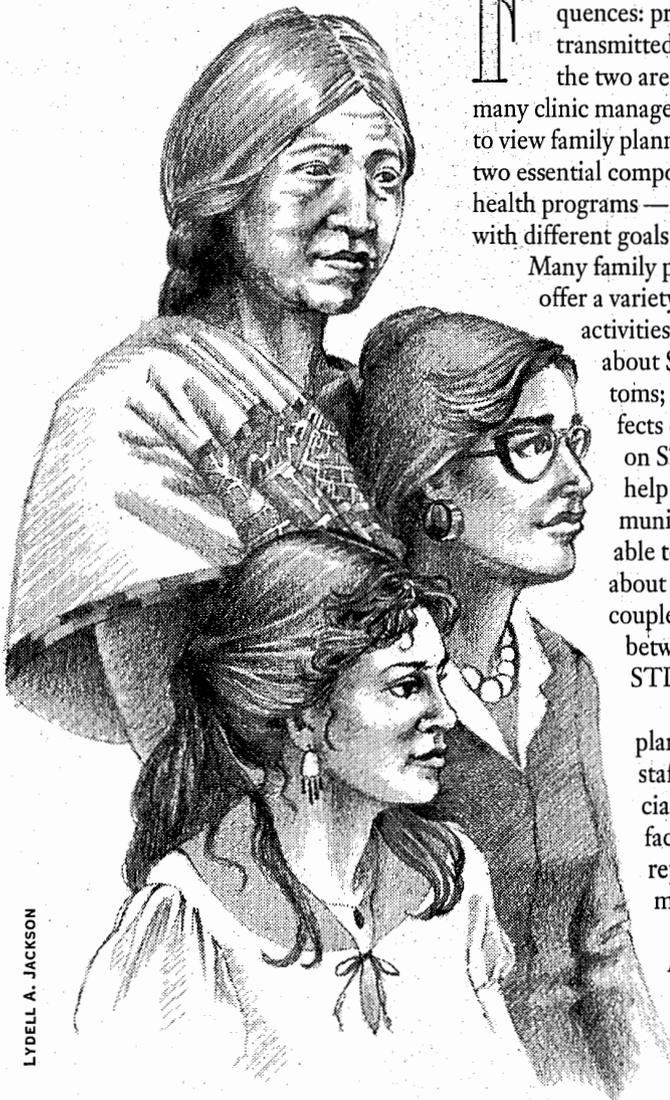
"The reality is that AIDS is a threat to family life," says Dr. Sunanda Ray, a former research

fellow at the University of Zimbabwe medical school. "It is responsible to plan families. It is responsible to protect families, and protection includes protection against all forms of disease. It is important to include both family planning and disease protection in a reproductive health package."

Educating women about their risks, ways to protect themselves and how to voice their needs and concerns is an important strategy in the effort to curtail STD and HIV infections, as well as prevent pregnancy. Since much of this information also helps women to control their fertility, experts say the link between family planning and STD services is a logical one.

"These are all connected together," says Dr. Florence Tadiar of the Women's Health Care Foundation (WHCF) in the Philippines, where STD services and family planning were offered when WHCF clinics first opened their doors in the 1980s. "You have to look at the whole woman — teaching her things that would protect her health, her children's health, the health of her husband."

Worldwide, numerous health-care programs are working to integrate family planning and STD services, with the aim of educating women, empowering them to communicate with partners, and helping them improve their reproductive health. Three programs in Asia, Latin America and Africa illustrate the integration already occurring.



LYDELL A. JACKSON

RESPONDING TO NEEDS

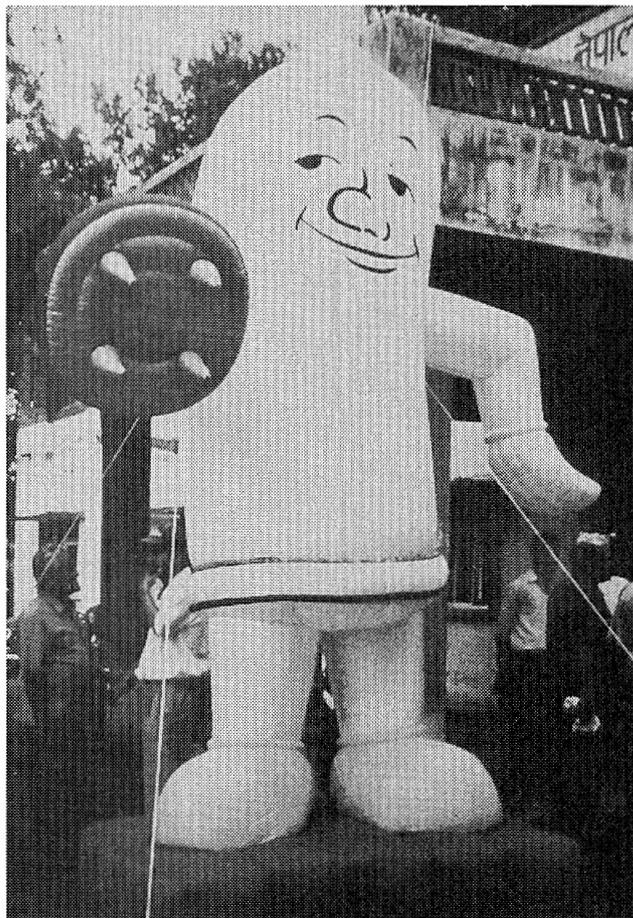
In Nepal, the Chitwan Static Clinic has offered family planning and maternal-child health services for 12 years. In February 1996, the clinic began to offer STD services, in part because health-care staff noticed an increasing number of female family planning clients with reproductive tract infections.

In an innovative program, the Nepal clinic offers diagnosis and treatment of STDs using the syndromic approach, plus education about STD prevention through a community outreach program. During its first 10 months, the clinic treated 416 women and 95 men for STDs, and provided education programs to many others. Administered by the Family Planning Association of Nepal (FPAN), the Chitwan clinic's STD services are supported by FHI's AIDS Control and Prevention (AIDSCAP) Project.

"The integration of family planning and STD services provides an opportunity or entrance point for women to seek services for health issues considered sensitive by young Nepali women," write Joy Pollock and Asha Basnyat of AIDSCAP's Nepal office. "Before the start-up of these services, women were unwilling to go to the public hospitals or health centers for STD care due to issues of confidentiality and ignorance [not recognizing symptoms]. Services from private providers can be very expensive."

The clinic reports that demand for these services has increased dramatically, primarily due to word of mouth, drawing women from distant villages.

While no formal evaluation has been done, AIDSCAP and FPAN staff believe the program is helping empower women by providing knowledge about reproductive health. When women attend education sessions on STDs, "it is as if someone is telling them that these are symptoms that do not have to be borne as the fate of women but actually can be relieved," says Kari Hartwig of the AIDSCAP Asia regional office in Bangkok.



A BALLOON REPRESENTING A CONDOM IS DISPLAYED OUTSIDE A MATERNAL-CHILD CLINIC IN NEPAL WHEN THE CLINIC BEGAN OFFERING STD SERVICES.

With the introduction of STD services, the Chitwan clinic added Sunday hours and extended its weekday schedule. Clinic staff believe extended hours may encourage women in high-risk groups, such as commercial sex workers, to come for STD services when there are few family planning clients. The program has been so successful that FPAN is opening two new STD and family planning offices.

Education about STD prevention, including behavioral change and communication between couples, is integrated with other components of family planning. For example, "Depo-Provera Day" traditionally was set aside for couples to come to the clinic to learn about this injectable hormonal contraceptive and for women to re-

ceive the method if they wanted it. Usually there is standing-room only in the clinic. "This is a great opportunity to show a videodrama about HIV/AIDS to a husband waiting for his wife," reports Dr. Bijaya Neupane, clinic director.

In addition to clinic services, the FPAN clinic has a peer education program to counsel women in their homes about STD risks and symptoms and to provide condoms. Working with the General Welfare Pratishthan's outreach education staff, FPAN has trained female peer educators to refer women who may need medical treatment to the Chitwan clinic. In September 1996, 35 of the 68 people treated for STD symptoms were referred by community workers.

Prior to the addition of STD services, the FPAN clinic offered male condoms as a contraceptive method. "The program focus was on family planning in the traditional sense. Condoms were promoted for limiting family size, not for disease prevention," says a report from Dr. Bijaya Neupane. Today, FPAN provides counseling to clients and their partners on condom use as a means of preventing STDs and AIDS, as well as unplanned pregnancy.

To meet the anticipated demand created by the new STD services, FPAN hired additional staff, including a nurse, a health aide and a health educator. The clinic also trained existing staff, including family planning nurses, counselors, lab technicians, health aides and field supervisors, to serve on its STD services team. The same staff who educate clients about STDs also train staff on the importance of disease prevention to the health of the family. Experts recommend that managers involve staff when planning new services and offer continual follow-up training.

One of the problems FPAN has encountered is that poor women have not been able to afford drugs needed for STD treatment. While the clinic can provide large numbers of free condoms for STD prevention, it cannot afford to supply free drugs for

treatment. Staff are hoping to identify additional sources locally to buy drugs for these clients.

PROVIDER ATTITUDES

In the Latin American countries of Brazil, Honduras and Jamaica, International Planned Parenthood Federation's (IPPF) Western Hemisphere Region is conducting a pilot project to integrate family planning and STD services at local affiliate clinics. The project, funded by the U.S. Agency for International Development (USAID), trains providers to view STD services as an essential component in addressing reproductive health needs, not as an optional service added to family planning programs.

Traditionally, family planning counseling has focused on provision of contraceptive methods, with the aim of helping women prevent unplanned pregnancy. The increasing incidence of AIDS, coupled with demand from clients for more information, is motivating family planning providers to broaden their discussions with clients to include sexual behavior and gender roles, says Julie Becker of IPPF.

"Every day, I am with a person who, if [she] does not have AIDS, or her husband does not have AIDS, she has some cousin, uncle or brother with AIDS or HIV," says a counselor at the Asociación Hondureña de Planificación de la Familia (ASHONPLAFA) clinic in Honduras. "I have had to see so many cases that it is no longer strange."¹

IPPF's program trains providers to change the starting point of counseling sessions — from a discussion of contraceptive devices to a discussion of the client's sex life. For

example, providers may ask: Who is your sexual partner? Do you think your partner has other partners? How do you feel about his or her other relationships? Are you satisfied with your sex life? Do you feel pleasure when you have sex? These questions can open up discussion about the client's concerns about STDs and unplanned pregnancy, as well as fertility goals — important factors in choosing a method, says Becker.

"Previously, we used to talk about methods, and we would arrive at an agreement with a client," says a counselor at the ASHONPLAFA clinic. "But now we go much deeper. We ask if she has an infection ... we look for risk factors ... we can talk about other things, such as sexual relations."²

Training staff was an important first step in integrating family planning and STD services. In all three countries, a variety of staff members — including counselors, educators, physicians, nurses, administrators, support staff, drivers, and cleaning staff — attended two- to three-day sessions on HIV and STDs, sexuality, education and counseling skills. Additional training allowed staff to discuss broader issues of reproductive health, gender and power, and communication about sexual issues.

Sessions also included training on correct condom use, and staff discussed biases against condoms, which in typical use are less effective as contraception. Prior to the training sessions, providers tended to recommend condoms as a backup method, or a

method of last choice when other methods were not available. Afterward, staff were able to provide instructions on condom use and promote the dual benefits of condoms as a method to prevent both pregnancy and STDs. Some staff said they themselves began using condoms.

After training, client condom use increased significantly. In Jamaica, 245,000 condoms were distributed at clinics in 1994, compared with 60,000 in 1992. In Brazil, 36 percent of all new family planning acceptors asked for condoms.³ In addition, an FHI study in Jamaica shows that many women are asking for condoms in addition to another contraceptive method, indicating that dual method use has become more acceptable.⁴

A central theme in all training sessions has been that integration of services can improve the overall quality of and sensitivity to women's and men's health. A physician at the Sociedade Civil Bem-estar Familiar no Brasil (BEMFAM) said, "Someone can be a good professional, knowing how to

CARE INTERNATIONAL



REPRODUCTIVE HEALTH SERVICES HELP A WOMAN TO PROTECT EVERYONE'S HEALTH IN HER FAMILY — HER HUSBAND'S, CHILDREN'S AND HER OWN. A MOTHER AND DAUGHTER PLAY IN CHUQUISACA, BOLIVIA.

insert an IUD correctly, knowing exactly which medication should be given for gonorrhea, but his [approach] needs to involve viewing a person as a whole, tending to a client from a holistic perspective of overall health and well-being."⁵

In working with clients, one of the goals of the IPPF pilot program is to help women learn how to communicate about sexual issues. For many women, talking with a partner about sex is taboo, making condom negotiation impossible. Often women lack power within a relationship, and refusing to have sex can carry consequences of physical violence and abandonment.

"A lot of the same issues in communication and negotiation are the same for HIV prevention and pregnancy prevention," says Becker. "The behavioral change we are looking for with women is for them to be able to communicate and negotiate, not just about HIV, but pregnancy. We are helping empower women to bring up the subject of sex with their partner. You cannot disentangle the way a woman feels about her sex life with her ability to talk about her sex life. If she cannot talk to her partner, she is never going to get him to use a condom."

In Brazil, more than 3,000 women have participated in group discussions that allowed them to share concerns with other women about sexual issues, such as STD history, risk and condom use, and to "practice" conversations with their partners. "The sharing of life stories allows women to recognize that they are not alone in their feelings," says Rita Badiani of BEMFAM. "The group setting permits women to express themselves and practice more assertive behavior in a non-threatening environment, helping them to overcome feelings of intimidation in communicating with their partners about sexuality and preventive practices."⁶

BEMFAM staff say these sessions had positive results. One participant, who wanted to become less financially dependent on her partner, found a job. Another woman, who participated three times in group discussions, said her husband now uses condoms. "Now I feel more secure," she said, "and indeed feel pleasure."⁷

Similar discussion sessions were held in Honduras, and a focus group of community members in Jamaica has recommended assistance in building communication skills between the sexes.

COMMUNITY DIALOGUES

In the West African country of Nigeria, another type of group discussion is being used as a strategy to reduce the incidence of AIDS, STDs and unplanned pregnancies. Community dialogues — a series of eight focus group discussions — have been held with workers, market women and young people to explore their perceptions of how men and women communicate about a variety of topics. The dialogues, sponsored by AIDSCAP's Women's Initiative, will be used to develop programs to improve communications between couples about reproductive health.

"The goal is to increase the level of communications between the sexes at home, in the workplace and at the community level," says Dr. Eka Esu Williams, resident advisor for AIDSCAP in Nigeria and president of the Society for Women Against AIDS in Africa. "The approach is to understand what the parameters for a dialogue should be, how should a dialogue take place, when it should happen. Then, we will think how all this can be applied to AIDS and STDs services."

In analyzing dialogue results, AIDSCAP staff concluded there is a need for communication between men and women to be less formal and to introduce the topic of AIDS in an indirect, non-threatening way. "We need to talk about why this [disease] affects all of us," says Dr. Williams. "People will say, 'Oh, that has to do with prostitutes. It has nothing to do with us.' We need to talk about why men and women see things differently, why they respond differently, and how we can reduce those lines of division so that people are at the same starting point."

In helping women and men discuss AIDS, programs may be able to use messages similar to those used to promote family planning, Dr. Williams says. Often, proponents of family planning have encouraged couples to have only as many children as they can care for financially. AIDS prevention messages might also address the importance of disease prevention as a means of ensuring the family's future, Dr. Williams says. "We have to explain AIDS in terms of what will happen to children. We have to present it in terms of what happens to the family rather than what happens to the individual."

To link AIDS prevention with pregnancy prevention, AIDSCAP's Nigeria office is conducting training for AIDS workers that incorporates information on family planning. In addition, peer education programs for young people have been expanded to include discussions of abortion and pregnancy, as well as AIDS. Dr. Williams says combining family planning and STD services and expertise may be a more efficient, effective way to deliver reproductive health services.

As in Brazil, discussion groups have proven to be an effective means of encouraging women to express concerns about reproductive health — and a way of involving men, says Dr. Williams. In same-sex discussion groups, "women develop solidarity," she says, and gain confidence in speaking about sexual issues. Often, when discussion groups are held for women, men will express an interest in attending, too. Group discussions can be less threatening than one-on-one communications between husband and wife, Dr. Williams says. Because not all women can easily talk to their partner about STDs and AIDS, AIDSCAP has trained women leaders to talk to groups of men about AIDS prevention.

— Barbara Barnett

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FACTORS INFLUENCE SERVICES

In developing programs that integrate family planning with services to prevent or treat sexually transmitted diseases (STDs), health care providers should recognize factors that can influence women's access to, or use of, reproductive health services:

• **Biology** — STD transmission, including transmission of the AIDS virus, may be easier from men to women than from women to men because a large area of vaginal and cervical mucosa is exposed to male sexual fluids during intercourse.¹ STDs, which can be a risk factor in acquiring HIV, are more often asymptomatic in women than in men, so many women do not realize they have an STD. Family planning clinics can help women evaluate their STD risks, recognize symptoms and understand how to protect themselves.

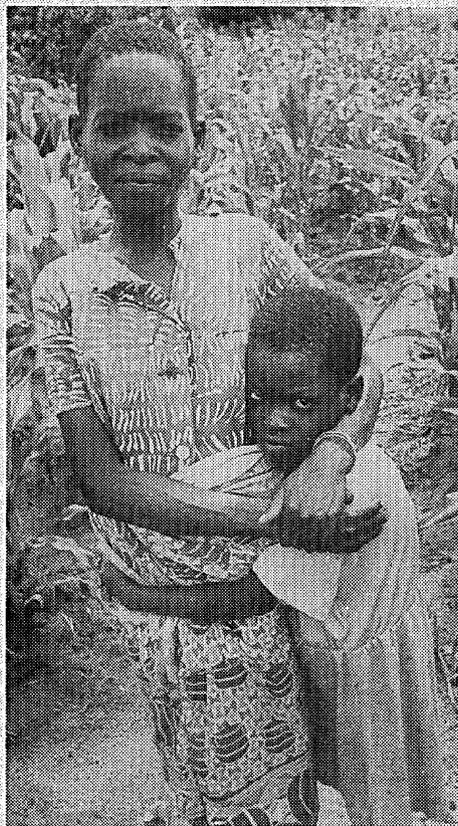
• **Economics** — For many women, sexual relationships are often linked directly or indirectly to economic security. For example, a woman may want to become pregnant because children provide marital stability or status within the community.² Consequently, she may avoid using condoms despite a need for disease prevention. For some women, sex is a means of economic survival. A study in Haiti, conducted by FHI's AIDS Control and Prevention (AIDSCAP) project, found many women feared that their partners would withhold money for rent, child care, food and other items if they refused sexual relations.³ In the Dominican Republic, researchers found that among women living in *bateyes*, plantations where sugar cane is harvested, one-fifth had traded sex for money.⁴

• **Cultural norms** — In many cultures, men are viewed as authority figures, and women are discouraged from questioning their partners' actions. "If you cannot talk to your partner about the children's school fees, or where you are going to live — if you cannot ask the man where he is going when he leaves the house — you definitely cannot talk about condoms," says Dr. Maxine Ankrah of the AIDSCAP Women's Initiative.

In some societies, women are expected to have one partner, while it is acceptable for men to have several wives or to have partners

outside of marriage. One young married woman in Cambodia explained, "In Khmer society, it is nothing for men to have other partners or a second wife because people compare the men to gold and the women to cotton."⁵ Social taboos also discourage

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ECONOMIC CIRCUMSTANCES AND CULTURAL SURROUNDINGS INFLUENCE REPRODUCTIVE HEALTH FOR MANY WOMEN.

women from talking or learning about sex, believing that ignorance is a sign of purity.

• **Risk perceptions** — Because AIDS prevention programs have often been targeted toward high-risk groups, including commercial sex workers, many women do not perceive themselves at risk of HIV infection. Research conducted in Brazil, supported by FHI, found that "although women know how HIV can be transmitted, they do not perceive themselves to be at risk because they are married or in a consensual union.

Women believe if they stay with one partner, they will be protected."⁶

Male latex condoms, the only contraceptive recommended for protection against both viral and bacterial STDs, are often viewed as a method that is used between casual sex partners but not husbands and wives. In Thailand, approximately 70 percent of couples of reproductive age use some form of contraception, but only 2 percent of married couples use condoms.⁷ If a woman suggests condom use, her partner may suspect she is unfaithful — or that she thinks he is unfaithful. Researchers in Thailand found that among the more than 700 men and women interviewed, 60 percent said that condoms should not be used with spouses or regular partners because it might create tension or mistrust.⁸

— Barbara Barnett

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Reducing the HIV Risk from Mother to Infant

HIV transmission can occur *in utero*, during birth or from breastfeeding.

Between one-fourth and one-third of infants born to women infected with HIV worldwide become infected themselves.¹ Called “vertical” or “perinatal” transmission, passing this infection from mother to child is the primary means by which infants acquire HIV.

Most pregnant women with HIV have been infected through unprotected intercourse. Consequently, providers should recognize that promoting HIV prevention among women is the primary means of preventing HIV infections among infants. For those women who do become infected, preventing pregnancy is a secondary way of reducing the spread of HIV to infants.

Although it is clear that infections can occur *in utero*, during birth or through breastmilk, researchers are not sure about the relative risk associated with each phase.

“In the future, new research findings may affect recommendations to help HIV infected pregnant women protect their offspring from HIV,” says Elizabeth Preble of FHI’s AIDS Control and Prevention (AIDSCAP) Project. “In the meantime, however, policy-makers should understand that our current knowledge about HIV transmission to infants involves complex issues such as breastfeeding versus bottlefeeding, voluntary and available HIV testing, and other issues.” Preble is drafting guidelines for the World Health Organization (WHO) on STD prevention in the maternal and child health/family planning setting.

PREGNANCY AND DELIVERY

During pregnancy, the stage of maternal infection can affect perinatal transmission rates. The greater the progression of disease in the mother, as measured by viral load or CD4 cell counts, the more likely is transmission. Other factors that may increase the risk include hemorrhage during labor, vaginal delivery, duration of labor after the rupture of membranes, and some obstetrical approaches. Amniocentesis or other invasive procedures before labor are also factors that may increase the risk.²

In 1994, a clinical trial showed that drug therapy with zidovudine, or AZT, decreased transmission from pregnant mother to newborn. AZT was given to women after their first trimester of pregnancy, intravenously during labor and delivery, and was given to their infants for the first six weeks of their lives.³ In countries where AZT is available, AZT therapy increased dramatically after the report.

In a follow-up study of 103 infants whose infected mothers received AZT therapy and 453 infants whose mothers did not, HIV transmission was 19 percent among those not using AZT but only 8 percent among those receiving therapy.⁴

Currently, the cost of drugs such as AZT is prohibitively expensive in most developing countries. Studies are testing new drugs and simpler regimens that may curtail transmission at lower cost.

(In January, a U.S. National Institutes of Health advisory panel recommended that infected mothers should continue taking



MARY O'GRADY/AIDSCAP

A DOCTOR IN KENYA EXAMINES AN AILING INFANT.

AZT to reduce chances of infecting their babies, despite a National Cancer Institute study that raises questions about whether the drug may increase cancer risks. The study found high doses of AZT increased lung, liver and skin cancers in baby mice. However, there is no evidence of any human child getting cancer after AZT treatment, and a study by the manufacturer of AZT found no risk among mice from lower doses that would be equivalent to those given pregnant women.)

Other research is testing treatments with a specially made immunoglobulin, which contains antibodies to HIV. This immunoglobulin comes from infected individuals, but it has been carefully treated to kill HIV and other infectious agents. It theoretically should boost the immune systems of pregnant mothers and infants, so that the virus is less likely to be transmitted from mother to child.

Some studies have suggested that cesarean section delivery in HIV-infected mothers can have a protective effect by avoiding passage through the birth canal, where there is contact with infected maternal blood and cervical fluids. However, study results are inconclusive.

Moreover, cesarean births, especially in developing countries, have a relatively high risk of postoperative mortality. Two recent studies provide some evidence that complications of a cesarean section are common among HIV-positive women, particularly those who have severely suppressed immune systems.⁵

Obstetrical interventions that could increase the risk of HIV transmission should be avoided. The rupture of membranes for more than four hours prior to delivery may be associated with increased risk of HIV infection, so intentionally rupturing the membranes to induce or accelerate labor

should be avoided.⁶ Also, placing internal fetal-scalp electrodes should be avoided when labor can be managed safely with external fetal monitoring.⁷

Other types of interventions under consideration are disinfecting the birth canal of HIV-infected women and using vitamin A. A recent study using chlorhexidine to wash the birth canals of HIV-infected women in Malawi did not reduce the transmission rate except among those whose membranes were ruptured more than four hours before delivery.⁸ Another Malawi study suggested that maternal vitamin A deficiency contributed to the risk of perinatal transmission.⁹ Studies are testing a vitamin A supplementation program, which would be practical and inexpensive in resource-poor settings.

BREASTFEEDING

The benefits of breastfeeding are well established. It promotes development of a newborn's gastrointestinal and immune systems and, by enhancing immunity, lowers the risk of diseases such as meningitis and infections of the respiratory system. Breastfeeding protects babies from diarrhea, the major cause of infant death in developing countries, and provides excellent nutrition without potential infection from unclean water. It also benefits the mother, including a more rapid postpartum recovery and a reduction in breast cancer risk. Finally, breastfeeding is a key component of the lactational amenorrhea method (LAM) of pregnancy prevention.

However, studies have shown conclusively that breastmilk transmits HIV. A review of four studies of women who acquired HIV infection postnatally estimated the risk of transmission through breastfeeding at 29 percent. The same review analyzed five studies in which the mother was infected prenatally and found an additional risk of transmission through breastfeeding, over and above transmission *in utero* or during delivery, to be 14 percent.¹⁰

Several models have sought to determine whether a change from breastfeeding to bottlefeeding would result, on balance, in a higher or lower child mortality. The models weighed the risk of HIV infection against the risk of dying from diarrhea and other infections.¹¹

The models suggest different breastfeeding policies for three different settings. Most models conclude that for places where infant mortality, HIV prevalence and mortality from bottlefeeding are all high, any change from breastfeeding to bottlefeeding would harm a child's prospects for survival.

In affluent, industrialized countries, where bottlefeeding has little adverse effect on child mortality, bottlefeeding by known HIV-infected mothers can increase child survival.

In intermediate settings, the appropriate policy is not clear. In 1992, WHO and the United Nations Children's Fund (UNICEF) considered relative risks carefully in making recommendations for these intermediate settings. Where other infectious diseases and malnutrition are primary causes of infant deaths, the recommendations say, "breastfeeding should remain the standard advice to pregnant women, including those who are known to be HIV-infected, because their baby's risk of becoming infected through breastmilk is likely to be lower than its risk of dying of other causes if deprived of breastfeeding."¹²

Few developing countries are prepared to provide universal HIV testing for pregnant women. One exception is Thailand, where such testing occurs in some areas. "Women identified as HIV-infected in early pregnancy are advised to seek a termination, those identified in later pregnancy are told to bottlefeed and given supplies of breastmilk substitutes," report Dr. Angus Nicoll of the Communicable Disease Surveillance Centre in London and colleagues.¹³ Voluntary HIV counseling and testing can give pregnant women the information they need to make an informed decision about their current pregnancy and future childbearing.

— William R. Finger

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BETTER FAMILY PLANNING SERVICE IS ONE WAY TO REDUCE THE SPREAD OF HIV TO INFANTS. MOTHERS IN KENYA LEARN ABOUT BIRTH CONTROL.

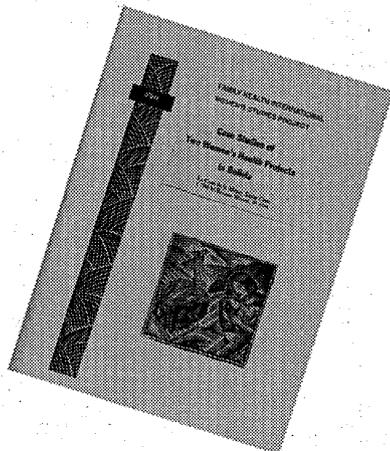


IMPACT VISUALS/SEAN SPRAGUE

Resources

FHI BOLIVIA CASE STUDY

FHI's Women's Studies Project has published *Case Studies of Two Women's Health Projects in Bolivia*, the second in a series of studies on women-centered health programs. The study profiles two programs in Bolivia: La Casa de la Mujer in Santa Cruz and the Kumar Warmi (Healthy Woman) clinic operated by the Centro de Información y Desarrollo de la Mujer in El Alto. Both programs have involved women in the design and delivery of health care and both offer health care as one of an array of services designed to improve women's

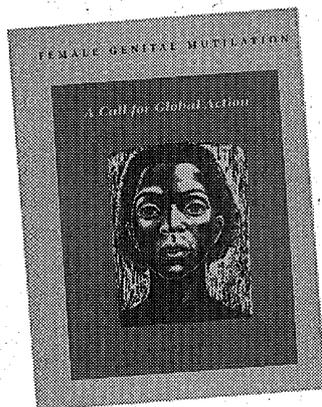


quality of life. Copies of the case study in English may be obtained at no cost by writing: Publications Assistant, Family Health International, PO Box 13950, Research Triangle Park, NC 27709 USA. For a Spanish version at no cost, write to: Family Health International, Calle Lisímaco Gutiérrez, Pasaje 490, No. 4 (entre 20 de octubre y Sánchez Lima), Casilla No. 3380, La Paz, Bolivia.

The study is also available on FHI's home page at: <http://www.fhi.org>.

FEMALE GENITAL MUTILATION

The report entitled *Intersections Between Health & Human Rights: The Case of Female Genital Mutilation* addresses the roles and responsibilities of health professionals in dealing with female genital mutilation. Published by Research, Action & Information Network for Bodily Integrity of Women (RAINBO), a nonprofit organization, the report is available to developing



country readers free of charge and U.S. \$6.95 to others. Another report, *Call for Global Action*, provides an introduction to FGM and is free to developing country readers or U.S. \$9.95 to others. Copies may be obtained by contacting: Research, Action & Information Network for Bodily Integrity of Women (RAINBO), 915 Broadway, Suite 1109, New York, NY 10010 USA. Telephone: (212) 477-3318. Fax: (212) 477-4154.

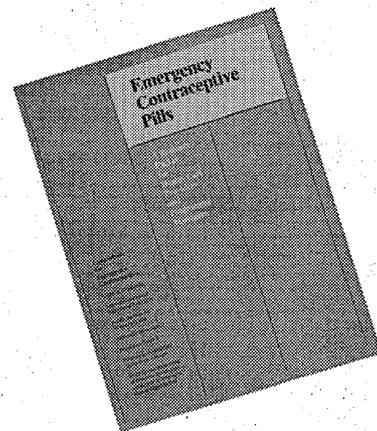
AVSC INTERNATIONAL PUBLICATION

Ways to improve client-provider interaction are covered in *COPE: Client-Oriented, Provider-Efficient Services*, produced by AVSC International. The book compiles lessons learned from international health agencies in more than 20 countries, with training exercises and self-assessments. Topics include voluntary sterilization, temporary contraceptive methods, and other reproductive health services, such as postabortion care, services for men

and prevention of sexually transmitted diseases. Individual copies are available free to developing country providers and U.S. \$8 to others by contacting: Felicia Brockett, AVSC International, 79 Madison Avenue, New York, NY 10016. USA. Telephone: (212) 561-8058. Fax: (212) 561-8058.

EMERGENCY CONTRACEPTION PACKET

The Consortium for Emergency Contraception, a collaboration among seven organizations committed to expanding the availability of emergency contraceptive services, is distributing an information packet. *Emergency Contraceptive Pills: A Resource Packet for Health Care Providers and Programme Managers* contains materials for clients, standardized medical and service delivery guidelines, a question-and-answer sheet, a list of scientific references and other materials. A separate training curriculum is also available. The packet and training curriculum are available in English to developing country providers



free of charge, and in limited numbers to others, by contacting: Sharon L. Camp, Consortium Coordinator, 8930 Camp Road, Welcome, MD 20693 USA. Telephone: (301) 753-1926. Fax: (301) 753-1927. Both are also available through the consortium's home page at: <http://www.path.org/ecconsor>.