Network

FAMILY HEALTH INTERNATIONAL, VOL. 13 NO. 4, MAY 1993

AIDS: The Second Decade

News Briefs

U.S. FDA strengthens labeling on STD protection

The U.S. Food and Drug Administration (FDA) in April strengthened its labeling requirements for contraceptives about the level of protection each method provides against HIV and other sexually transmitted diseases.

Labels on oral contraceptives, injectables, implants, intrauterine devices (IUDs) and natural skin condoms must state that the products are meant to prevent pregnancy, not STDs.

Natural skin condom labels will direct consumers seeking protection against STDs to use latex condoms, the only product allowed to make a claim of effectiveness against such diseases.

Latex condom labels — on boxes, individual wrappers and in consumer information — will state that condoms, if used properly, will help reduce the risk of transmission of HIV and many STDs.

"Safe sex isn't just about preventing pregnancies," said FDA Commissioner Dr. David A. Kessler. "It's about stopping this epidemic of diseases."

The FDA in May approved the female condom for use in the United States. Labeling will inform users that male latex condoms are "highly effective" at preventing STDs, but will add: "If you are not going to use a male latex condom, you can use [the female condom] to help protect yourself and your partner."

Diseases such as AIDS, chlamydial infection, genital herpes, gonorrhea, hepatitis B and syphilis are transmitted through sexual contact.

Berlin AIDS conference expected to draw 15,000

New approaches to therapy, the rapid spread of HIV infection in Asia and the development of highly resistant tuberculosis strains will be some of the major issues addressed at the IXth International Conference on AIDS, to be held in Berlin June 7-11.

"There is a huge number of new results in basic medical research," says Dr. Karl-Otto Habermehl, chairman of the conference and director of the Institute for Clinical and Experimental Virology in Berlin.

As many as 15,000 researchers, activists, health professionals and media representatives are expected to attend the conference, where experts in medicine, virology and social sciences will submit nearly 6,000 presentations about their latest findings. Combined drug therapy, vaccines and gene therapy will be discussed as possible treatment or prevention strategies.

Family Health International will send 60 health professionals, 40 of whom are FHI collaborators in developing countries, to the conference.

About U.S. $2.3 million is being contributed to pay the way for representatives from developing countries, non-profit organizations and people with AIDS, Dr. Habermehl says. The German government and organizations attending the conference are providing most of that contribution.

Family planning access expanding in five nations

Indonesia, Bangladesh, Iran, Peru and Zimbabwe are among countries making impressive progress in expanding access to family planning services, according to a U.S.-based family planning organization.

"Governments are in a position to make a powerful difference in the reproductive lives of their citizens, says Dr. Sharon L. Camp, senior vice president of Population Action International (PAI), the research and advocacy group. "There is remarkable progress in some surprising places."

Since Iran authorized a family planning program in 1989, modern contraceptive use has jumped to more than 20 percent of couples. In Indonesia, more than 50 percent of couples now use a contraceptive method. Contraceptive use in Zimbabwe has tripled in less than a decade, according to PAI, from just 14 percent of couples in 1979 to 43 percent in 1988. Recognizing the threat of AIDS, the Zimbabwean government has dramatically increased the number of condoms it distributes, from 500,000 in 1986 to an estimated 65 million in 1992.

In Bangladesh, the doubling of contraceptive use — from less than 20 percent of couples in 1981 to 40 percent in 1991 — is a remarkable achievement given the country's extreme poverty, high levels of illiteracy, and the low status of women, PAI says.

Nearly 2 million have used Norplant

An estimated 1.8 million women worldwide had used Norplant as of the end of 1992, an increase from 1.1 million users at the end of 1991, according to The Johns Hopkins University School of Public Health.

Introduced in Finland in 1983, Norplant has now been approved in more than 20 countries.

Norplant, a subdermal implant, lasts up to five years and is completely and quickly reversible, making the method a good choice for some young women who want to delay pregnancy. It is also considered to be a good alternative to sterilization.

However, Norplant does not protect against AIDS or other sexually transmitted diseases. Women who need protection against these infections should use condoms even if they choose Norplant to prevent pregnancy.

The cost of Norplant may limit its use. In the United States, the set of capsules costs $350, not including insertion and removal services. In developing countries, a set costs only U.S. $23 when purchased by governments, donor agencies or nonprofit family planning organizations. Despite the much lower price in developing countries, says Johns Hopkins, Norplant still costs at least twice as much as the pill and at least one-third more than condoms. The comparison assumes that these methods are used for 3.5 years, the average length of Norplant use in international clinical trials.

Top drug firms plan joint AIDS research

In a move to speed research on drugs to treat AIDS, 15 major pharmaceutical companies announced in April that they would conduct joint studies of experimental medicines for treating the disease.

By pooling resources, it is hoped the companies will discover sooner which of the many drugs in early phases of research are superior and which may work in combination with others. "It is vital that the companies get together and share information early, to figure out which drugs will work best together," Dr. P. Roy Vagelos, chairman and chief executive of Merck & Co., told *The Wall Street Journal.* His company is among the 15 that will share research.

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Network
Family Health International
P.O. Box 13950
Research Triangle Park,
North Carolina 27709 USA

Phone: (919) 544-7040
Fax: (919) 544-7261
Telex: 579442

Associate Director, Information Programs
Elizabeth T. Robinson

Managing Editor
Nash Herndon

Editor
William R. Finger

Contributing Editors
Barbara Barnett
Carol Blaney
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Production Manager
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Computer Graphics
Salim G. Khalaf

Publications Assistant
Debbie Wade

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IN THIS ISSUE

Cover photo by Dr. John Moses of Durham, NC, of migrant worker picking tomatoes near Belle Glade, Florida. *See story p. 12.*

WOMEN & AIDS

THE FOLLOWING ARE PERSONAL PERSPECTIVES FROM FIVE WOMEN INTIMATELY INVOLVED WITH THE AIDS EPIDEMIC: A PERSON WITH AIDS FROM MEXICO; FHI'S DEPUTY DIRECTOR OF AIDSCAP FIELD OPERATIONS IN AFRICA; A TEENAGER PROMOTING CONDOM USE IN POLAND; THE LEADER OF AN AFRICAN WOMEN'S ADVOCACY GROUP; AND A JOHNS HOPKINS UNIVERSITY FACULTY MEMBER WHO HAS STUDIED ADOLESCENT FEMALES IN MALAWIAN VILLAGES.

"I am a widow with five children. I also have AIDS."

by Norma Martinez

NEZAHUALCOYOTL CITY, Mexico — I use the last energy of my life to tell you my story — so that you know.

I live outside of Mexico City. I am 32 years old, a widow with five children. I also have AIDS. Seven years ago, my husband found out that he had HIV, but we didn't know what that was. They told him that he was going to die in three months. He lived for five years without any kind of symptoms. Then he was sick for two years before he died. He became infected by donating blood, which was our income for a while. [Prior to procedural changes in Mexico in 1988, persons donating blood were exposed to the risk of HIV infection at some blood banks where needles were reused without being disinfected.]

I got pregnant with my last child after I found out I had the virus. The truth is, I really didn't want to have him, so I told the doctors that I was infected, that my husband had AIDS. They told me that they would do a test to see if that was true, but either way I had to continue with my pregnancy because abortions were only performed in special cases. When my new child was tested, he was found to be infected. He is now two years old.

I had a child before him. He would be three-and-a-half years old now. He died and nobody could tell us why. I took him to the doctor because he had diarrhea, and they told me he died of pneumonia. They scolded me, saying that I had neglected him.

The disease that my husband and I contracted has robbed my children of their childhood. My oldest, a son who is now 16, is responsible for bringing money home. My next is 13, a daughter. She is responsible for the housework. I don't want to tell her teachers about my disease. I am afraid they will forbid her to go to school and will isolate her. She is a good student. She got "A's" in school but now gets "C's" because of her absences.

My daughter is the one who takes care of us, hugs us, wears my clothes, eats from the same plate I do — and she is not infected. She knows that is not the way to get the virus.

But others don't know that. They think the way we used to think: that we have a disease that only weird people have, and that people get it for being bad. They don't know the feeling of being rejected. I don't want my children, besides being poor, being "marked."

We are poor, of course. We hardly have enough to eat. I need 90 capsules of AZT [used to treat AIDS symptoms] a month, but I can't afford to buy them. The jar of 100 capsules costs U.S. $150. We barely make U.S. $100 a month. I have to buy other medicine and should eat well. But I only buy beans.

Learning that I was infected changed our lives. For me, knowing that I was going to die soon made me stronger. I have to take care of a lot of things before I die. Who will want to take care of my children?

"MY DAUGHTER IS THE ONE WHO TAKES CARE OF US."

How will they remember me? What will they be like when they grow up? Will it be a relief for them when I am not around?

I weigh 57 pounds. Every time I go to the hospital I feel that it's going to be the last time. But these questions keep me going.

Also the anger — why me? Why like this? Why the silence? Why the rejection? Why don't people listen to me about AIDS? Why isn't there any information? Why didn't they tell us how to prevent infection?

I used my last strength to tell the story of my life so that you would know it. I don't want your pity; it doesn't help me at all. I have lived, in spite of everything, differently during my last days. I learned a lot. I was with other women and people who helped me, gave me support and taught me not to feel guilty — and to live the last days of my life with dignity.

I want you to do something. I want you to think as you listen to my story. What can you do in a situation like this? If you had known me, would you have stayed away from me? Would you have listened to me? Would you have eaten with me?

Don't answer me because I can't hear you now. Say it to yourself and then tell other women. I leave you my voice for you to hear it. Maybe you will forget, maybe you won't. I did what I could. The rest is up to you.

Norma Martinez told her story shortly before she died in 1991. Solidarity and Life for People with HIV/AIDS (SOLVIDA) developed her story into a slide and tape presentation, working in conjunction with CIDHAL, a nonprofit group in Mexico City, and FHI. This article is based on the presentation.

NORMA MARTINEZ, BACK RIGHT, WITH THREE OF HER CHILDREN.

AIDS Pandemic Hits Women Harder Yet Prevention Strategies Lag Behind

by Debrework Zewdie

WASHINGTON, D.C. — As I watched AIDS spread in recent years in Ethiopia, my home, the impact of this disease, especially on women, became close to my heart.

About one-third of all those infected with HIV are now women, and by the year 2000, there are expected to be as many HIV-infected women as men. The danger to the next generation thus mounts; about one of every four children born to an HIV-infected mother also is infected, and the number of AIDS orphans increases daily. In sub-Saharan Africa, infant and child deaths from AIDS may increase by as much as 50 percent during the 1990s, perhaps eliminating the gains made in child survival over the past 20 years.

"PREVENTION STRATEGIES FOR WOMEN MUST INVOLVE COLLECTIVE ACTION."

Existing efforts to control the spread of HIV infection are primarily the encouragement of partner reduction, widespread condom promotion and the control of other sexually transmitted diseases (STDs). These strategies have limited utility for many women.

For example, one recent study reported that in São Paulo, Brazil, married women with one sexual partner — i.e., their husbands — make up about half of all new AIDS cases among women. Their infection comes from the men, who have multiple partners. Also, campaigns emphasizing "stick to one partner" ignore the reality that women in many countries have sex with more than one man not for pleasure but for economic survival.

While using condoms is currently the best way to prevent HIV transmission, men have most of the power in determining their use. Reduction of STDs is certainly an important prevention strategy, but many STDs are asymptomatic among women. Also, seeking treatment at a clinic can be highly stigmatizing for women.

"The subordination of women is perhaps the most dangerous example" of how groups are made powerless regarding AIDS prevention, said Dr. Michael Merson, director of the WHO/Global Programme on AIDS, in a recent address. Many men "feel that they have a natural dominion over women.... A woman who is financially dependent on a man is the most vulnerable of all. Even if he refuses safe sex, she has little freedom to leave home, although if she stays it is at the risk of death for her and orphanhood for her children."[1]

Long-term improvements in women's power to avoid HIV infection involve the dynamics of gender relationships in economic, psychological and other terms. Changing those dynamics will take time.

So what can be done? "First and foremost, listen carefully to what women themselves suggest," said Dr. Merson. Women must participate equally in personal and community strategies to block transmission of the virus.

In addition, prevention strategies for women must involve collective action. While women alone may be powerless to change their partners' behavior, women working collectively may be able to change community sexual norms.

Prevention technologies being developed, especially barrier and virucidal methods, could shift control of transmission to some degree from men to women (*see article, page 9*). In the meantime, many forces must be addressed — from early childhood training to laws governing marriage, divorce and property rights.

AIDS has forced us to continue to confront the realities that have plagued women for centuries. Maybe the tragedy of AIDS ironically can help us seek broader rights for all women.

Debrework Zewdie of AIDSCAP is originally from Ethiopia and is a founding member of the Society for Women and AIDS in Africa.

Footnote

1. Merson MH. Keynote address, VIIth International Conference on AIDS in Africa, Yaoundé, Cameroon, 8 Dec. 1992.

SARA KRULWICH / NYT PICTURES

A 28-YEAR-OLD UGANDAN WOMAN DYING OF AIDS IS COMFORTED BY A SOCIAL WORKER FROM AN AIDS SUPPORT GROUP.

One Young Woman's Campaign: Rock Concerts and Graffiti

by Joanna Malewska

WARSAW, Poland — In 1989, some friends and I produced a radio-theater drama about AIDS and how to avoid HIV infection. Listeners called us and said it was funny, new, fresh and very interesting.

But because I used words like "condoms" and "sex" on the radio, I was sacked from my school. In Poland, the church is very strong and powerful and forbids us to talk about sex in the mass media. It was a hard time for me, my mother and our friends.

My mother, Dr. Maria Moneta Malewska, had just started a foundation called "You Are Not Alone," the first private, nonprofit organization in Poland working to prevent AIDS and to help people ill with the disease or infected by HIV.

When I asked the Ministry of Health for help, they said there were no funds for condom promotion. But I knew people like me were at risk. They were having sex at concerts, in toilet stalls with unknown partners. They were not going to school, and had no role models except their idols — musicians.

So two friends, my younger brother and I made big banners with pictures of condoms, bought 500 condoms with our own money and went to the biggest rock festival in Warsaw. When a famous music group played, I went on the stage and started to talk about AIDS — what it is, how to avoid it. At the same time my friends gave out condoms and leaflets. I was happy when, after the concert, people came to me and asked for more information about AIDS. Now we cooperate with more than 20 music groups and go to many concerts. We talk about AIDS and give out condoms.

> "BECAUSE I USED WORDS LIKE 'CONDOMS' AND 'SEX' I WAS SACKED FROM MY SCHOOL."

After that we started a "spray war." We wrote on walls: "Don't be silly, get that condom on your willy" and "Condoms are your best friend." After that, much more similar graffiti appeared on walls, written by others we didn't even know. In my opinion graffiti is the best way to promote condoms and AIDS prevention, because many thousands of people can see it every day when they travel to work, shop and come home.

When we got some money from France, we printed leaflets and gave them to night clubs and discos in Warsaw and two other cities. Everyone who bought a ticket got a leaflet and a condom. After that, we got a lot of letters with requests for cooperative action.

Then I went to the Ministry of Health once again. They told me I must give them a project and budget proposal. Then they would discuss it, and maybe they would give me some money. I was depressed. I couldn't give them a project asking for 500,000 zlotys to buy 10 spray-paint cans, because graffiti is forbidden in Poland by law. I also had no time for discussions. We had a new Catholic government, and it was impossible to get cheap, Polish condoms in shops.

I knew I had to start to talk about safer sex. We made new banners, and wrote on the walls: "Your hand is your best friend" and other such phrases. But we felt it wasn't enough. People still had sex with unknown partners. And then we got another idea.

Three of my friends are very beautiful and healthy looking girls, and they started to work with us. They went to concerts and to night clubs. When a man approached one of the girls and suggested making love, she would appear to agree. Then she would ask him for a condom.

If he didn't have one, and he often didn't, she would say, "Do you want to die?"

"Why?" he would ask.

"Because I am HIV-infected." The men were always shocked.

My girl friends were acting a role. They didn't really make love with the strangers. We knew this approach was morally questionable, but it worked. That was six months ago. Now it is almost impossible to meet anyone in those clubs who wants to make love without a condom.

Despite the law, morality and church, we have done quite good work. Young independent people have started to think about using condoms. And now we have a new government, and it is quite easy to get Polish condoms.

What I have learned is that people in a closed subculture must talk to people from the same subculture. I hope my experiences will be useful to you.

This is based on a presentation Ms. Malewska made at the VIII International Conference on AIDS in Amsterdam in 1992.

CAROLINA KROON, IMPACT VISUALS

ADOLESCENTS ARE IN THE BEST POSITION TO CONVINCE THEIR PEERS TO USE CONDOMS.

How Can We Help Adolescent Girls Avoid HIV Infection?

by Dr. Deborah Helitzer-Allen and Mercy Makhambera

THYOLO DISTRICT, Malawi — Village girls now know AIDS can kill, but most think it won't kill them. Disseminating messages through existing communication channels involving grandmothers, other elder women and peers could help correct this dangerously false perception. Condoms also need to be more available in the villages, along with counseling on negotiating their use.

About 90 percent of Malawi's 9 million people live in rural areas, and Malawian men living in the city return to their village at least once a year. Many young girls report receiving school fees and gifts in exchange for sex. All sexually active girls in Malawi are at risk of HIV infection.

Young women are considered "girls" until they go through the initiation ceremony led by a traditional adviser or *nankungwi*. According to custom, this initiation should take place after a girl has begun menstruating. After initiation, they no longer are called by their first name and most often live in separate dwellings within the household; they are then considered "women."

From 1991 to 1992, we conducted research involving almost 600 young females, ages 10 to 18. First, we lived in two villages and worked with 258 girls. We held in-depth interviews with the girls, their mothers and grandmothers; observed the girls in their daily activities; attended initiation ceremonies; talked with the village leaders, male and female; and held focus group discussions on questions of reproductive health, sex, and STD/HIV/AIDS prevention. From that work, we then developed several hypotheses, which we tested through a survey of 300 adolescent females in 10 other villages.

"CONDOMS NEED TO BE MORE AVAILABLE IN THE VILLAGES."

We found that four of every five girls had heard of AIDS, but only 14 percent believed they had a "good or moderate" chance of contracting it. This is in contrast to their perceived risk of contracting STDs, which was considerably higher. This perception about AIDS came from two mutually reinforcing messages effectively disseminated through radio, churches and word of mouth: that AIDS is transmitted by specific kinds of people — "easy" partners, bar girls and truck drivers; and that someone who can give you AIDS looks quite ill and can therefore be easily identified. These messages, while true, only tell part of the story.

More than 90 percent of the girls said they could avoid AIDS by not receiving blood; not sharing razor blades, needles or toothbrushes; and not having sex with "easy" partners. Few girls reported their partners, either boyfriends from the village or men from the city, as "easy" partners. A girl is not supposed to have sex before menstruation or before initiation, according to social norms, yet seven of every 10 girls had sex before one of these occurred. The average age at first intercourse is 13.6 years.

We found that grandmothers or older female community members tell girls about "female matters" such as menstruation, hygiene and illness. In contrast, most girls reported learning about sex from their peers. Much information about all of these matters is passed on during the initiation ceremony, but the *nankungwi* do not have regular contact with the girls at other times.

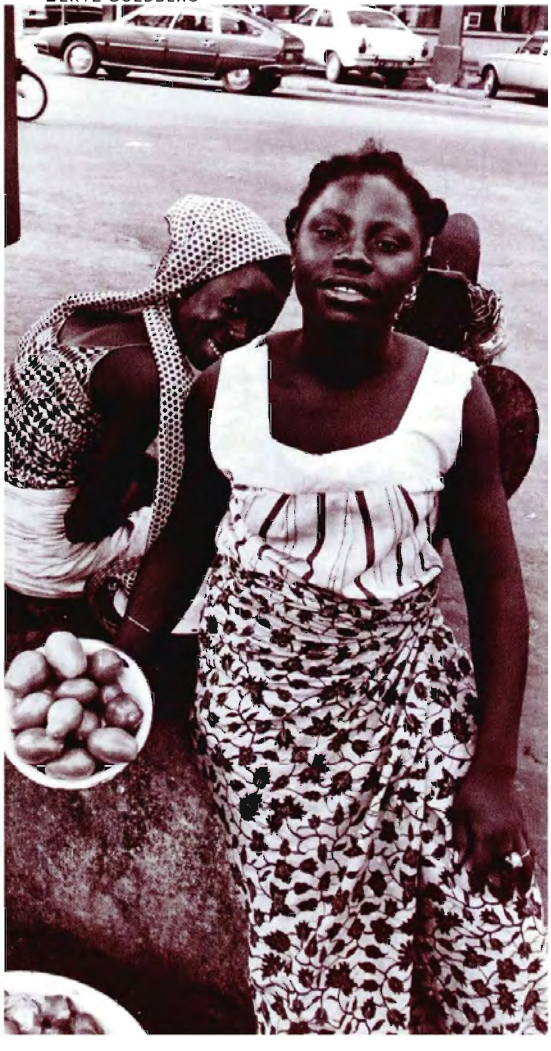
Girls are not generally in a position to reduce their risk of HIV infection. Fifty-five percent said they are often forced to have sex; 66 percent have accepted money or gifts for sex. But three-fourths of the girls said they would like help in learning how to convince a boy to use a condom. Currently, condoms are not very accessible because they are only distributed through the district hospital, a round trip of 25 miles for many people, or in limited numbers through shops and other outlets. All community members surveyed supported the concept of community-based condom distribution.

On the basis of these findings, we now propose to test a group of interventions, which would build on the work of the Malawi National AIDS Programme. They would be most effective if the entire community helped in their design and implementation. For example, if the older females in the community would agree to reinforce the prevailing social norm — no sex until after menstruation and initiation — seven of every 10 girls would at least put off sex for some time — an opportunity to increase their knowledge and skills regarding HIV prevention.

Likewise, if community-based condom distribution were implemented, the entire community would have more opportunity to maintain safer sexual practices, giving it a way to help reduce its members' risk of infection.

Dr. Helitzer-Allen, a faculty member at The Johns Hopkins University School of Hygiene and Public Health in Baltimore, MD, USA, has lived and worked in Malawi. Ms. Makhambera is a graduate student at the University of Malawi in the Women and Development Programme. *This project is one of 17 on women and AIDS sponsored by the International Center for Research on Women (ICRW), based in Washington.*

BERYL GOLDBERG



GIRLS SELLING TOMATOES AT A MARKET IN ABIDJAN, IVORY COAST.

How to Improve Prevention: Empower African Women

by Dr. Eka Williams

LAGOS, Nigeria — Women are increasingly confronted with the consequences of HIV infection as individuals, mothers, partners of persons with AIDS, and care providers. Unfortunately, intervention programs responding to women's needs so far are patchy, uncoordinated and offer minimal potential for impact.

In 1988, the Society for Women and AIDS in Africa (SWAA) formed to address the special needs, constraints and vulnerabilities of women in relation to HIV/AIDS. Now with chapters in 25 African countries, SWAA provides a forum for African women to challenge the threat of HIV/AIDS and to cope with its effects upon their lives, their families and their communities. SWAA has helped place the issues of women and AIDS on the AIDS prevention and control agenda. Now we need to bring these issues to the forefront so they can receive appropriate attention.

In order to empower women against HIV/AIDS, SWAA has identified several key objectives:

- identify the major HIV/AIDS risk factors for women and the barriers to prevention and control
- ensure that women-centered prevention and control strategies are incorporated into national AIDS programs
- foster the development of AIDS programs for women at the national level
- promote the rights of women affected and infected by HIV/AIDS.

"POLYGAMY, CHILD AND FORCED MARRIAGES, AND WIFE INHERITANCE COMPROMISE WOMEN'S STATUS."

The realization of these objectives has been hindered by cultural and gender factors, which traditionally have constrained and deprived African women. Practices such as polygamy, child and forced marriages, and wife inheritance compromise women's socio-cultural and economic status. Gender inequity and restrictive cultural/religious norms increase women's susceptibility to HIV infection.

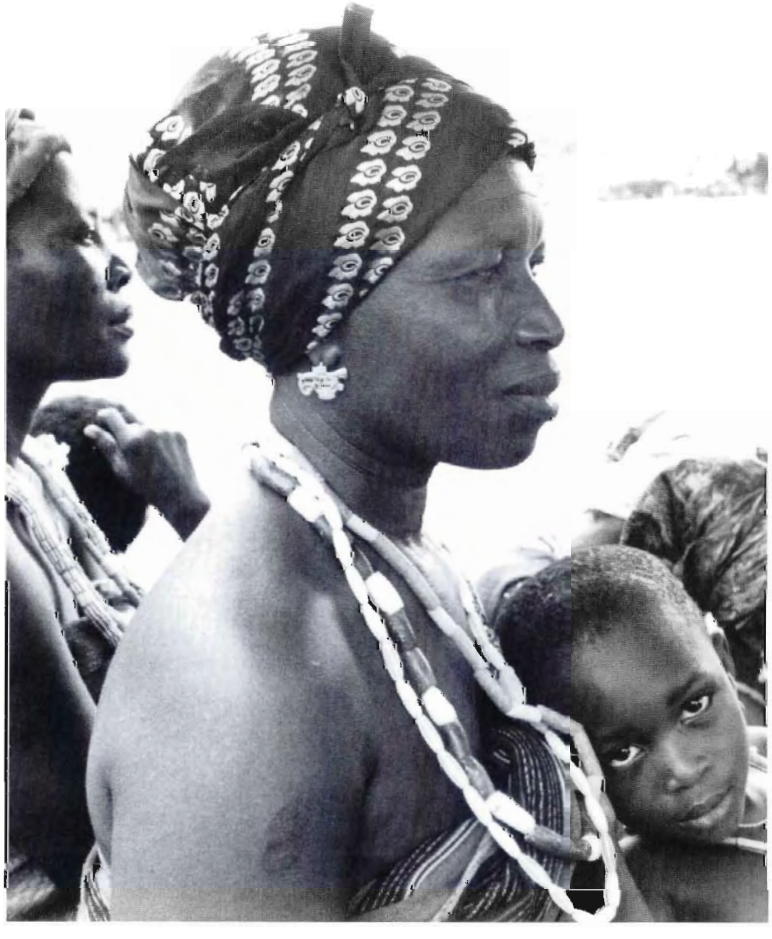
Some AIDS program managers in Africa are men who are insensitive to women and AIDS issues. Traditional prejudices and misconceptions about women preempt a proper understanding of these issues and hinder appropriate responses.

In addition, the health care system does not target women's needs that are related to AIDS, especially access to proper diagnosis and treatment of sexually transmitted diseases. The weak economic conditions in many African countries severely limit a woman's ability to earn income sufficient to sustain herself and her family. Because of the limited economic options for women, many resort to a risk-taking sexual lifestyle for survival.

There is an overwhelming need for sensitizing and educating AIDS program managers, opinion and policy leaders, and private health-care providers to the issues at stake for women. If women are to be empowered to tackle the problems of HIV/AIDS effectively, donor agencies have to take responsibility for earmarking funds for training, program development and implementation of projects among community-based groups that focus on women and AIDS.

Dr. Williams, an immunologist, is a founding member of the Society for Women and AIDS in Africa and is currently the President of SWAA.

BERYL GOLDBERG



STATUS OF AFRICAN WOMEN INHIBITS AIDS PREVENTION EFFORTS.

Seeking HIV Prevention Strategies for Women

Prevention often emphasizes male condom use to curtail transmission, an unreliable approach for many women.

A decade into the AIDS epidemic, women are more at risk than ever before of acquiring HIV infection through sex.

Women are biologically more susceptible to HIV transmission than men. The physiology of a woman's reproductive tract means that she faces at least twice the risk of contracting the fatal virus from an infected man, compared to the risk a man faces from an infected woman.[1] Moreover, transmission by heterosexual means appears to be increasing.

Many experts believe that more women than men will be infected worldwide by the end of the century — the reverse of the historical breakdown by gender. In sub-Saharan Africa and other regions of the world where HIV is primarily transmitted through heterosexual contact, there are already as many infected women as there are male victims. In some cities, as many as one-third of all women of reproductive age are infected.

With virtually no prevention strategy available that is completely under a woman's control, scientists are taking a closer look at female barrier methods, especially the female condom and spermicides, as potential ways to help women avoid infection.

Current prevention tactics emphasize efforts that most women can influence only indirectly — use of male condoms and partner reduction, ideally through a mutually monogamous relationship. Even if a woman herself practices monogamy, there may be little assurance in some cultures that her partner will do so.

Many women face social and emotional factors that make it impossible to negotiate condom use with an unwilling partner. "Only women, who confront centuries of social conditioning that grants sexual license to men, are expected to protect themselves without a technology they can control," write Christopher Elias and Lori Heise of the Population Council, in a working paper. Their recent paper concludes that female-controlled options for HIV prevention are urgently needed.[2]

Under her control

Several existing contraceptive methods that are under a woman's control may offer ways of reducing the transmission risk for sexually transmitted diseases, including HIV. Spermicides may provide a chemical barrier, while the diaphragm, cervical cap or female condom may offer a partial or complete mechanical barrier. Non-contraceptive chemical methods — in the form of topical creams or jellies — are also under study.

Wisconsin Pharmacal Co.

The female condom may reduce the transmission of STDs including HIV.

"Men control the use of condoms. Women control diaphragms and can control topical spermicides," says Zena Stein of Columbia University's HIV Center for Clinical and Behavioral Studies.[3] She believes HIV prevention programs would be much stronger if effective female-controlled strategies could be established.

Existing scientific data showing HIV protection by the female condom, other barriers or spermicides are limited, based mostly on animal or laboratory data — not actual use. The few studies that do involve humans have focused on contraception, using pregnancy rates as a surrogate measure for how effective a method might be in preventing HIV transmission. Results of that kind of study,

however, are encouraging, suggesting that current female-controlled contraceptives may have a place in HIV prevention.

Unanswered questions

To avoid infection, women need a barrier between male fluids and those cells of the female reproductive tract susceptible to infection. Unanswered questions, however, make developing such an effective barrier difficult. Can HIV be transmitted freely through seminal fluid, for example, or must it be associated with specific cells found in semen? Are all of the mucosal cells of the female reproductive tract susceptible to infection?

Spermicides used alone or with barrier methods such as diaphragms offer protection against gonorrhea and chlamydial infection, which are both cervical infections. How relevant this finding may be for HIV transmission is not clear, however, because of unresolved questions about the mechanism of HIV infection.

Many experts believe that the male condom should be the preferred HIV prevention option for men and women. There is disagreement, however, about what a woman should do if her male partner refuses to use a condom.

One group of experts concludes that women should be advised to continue urging male condom use by their partners as the sole prevention method available. It may be more harmful, they argue, to recommend a different, unproven protective measure. Others argue that using protective barriers and spermicides would offer some degree of protection for women who might otherwise have no protection.

Based on epidemiological analyses comparing rates of reproductive tract infections among users of condoms, diaphragms and sponges, two U.S. scientists at the Columbia University HIV Center in New York and Health Decisions, Inc. in Chapel Hill, N.C., conclude that female-controlled methods are as effective as male condoms in actual use. Their recently published findings challenge the widespread notion that women do not have an effective female-controlled prevention method.[4]

Yet three other U.S. scientists at equally prestigious institutions — the Centers for Disease Control and Prevention (CDC) in Atlanta, Valley Center for Women's Health in Sacramento, Cal., and the Office of Population Research at Princeton University — draw different conclusions. "We are concerned that the current data remain inconclusive regarding the absolute level of protection against HIV infection that these [female-controlled] methods can provide," they wrote in a commentary.[5]

The female condom

The vaginal pouch, or female condom, is a relatively new barrier device designed to give women more control over condom use. It lines the vagina with a thin plastic sheath so that a woman's cervix, vagina and external genitalia are protected.

Many women "want to start using them yesterday," says Erica Gollub of the Columbia University HIV Center, who has shown the female condom to women at high risk of sexual disease infection. "They tell me 'Once I've got this inside me, what can he do?' They feel empowered."

This sheath, expected to be available in the United States and Canada this year under the brand name Reality, is currently available in Switzerland, Austria and the United Kingdom under the name Femidom. The U.S. Food and Drug Administration (FDA) in May approved the female condom for use in the United States, but emphasized that data demonstrating its effectiveness in preventing STDs, including HIV, were limited.

"I have to stress that the male latex condom remains the best shield against AIDS and other sexually transmitted diseases," Dr. David A. Kessler, U.S. FDA commissioner, said when the intention to approve was announced. "The female condom is not all we would wish for, but it is better than no protection at all."

To date, the female condom has been the subject of clinical trials at 71 sites involving approximately 1,700 women. FHI and the U.S.-based Contraceptive Research and Development Program (CONRAD) sponsored clinical trials in the United States and Latin America between 1990 and 1992. These studies involved monogamous couples who used it for birth control, says FHI's Gaston Farr. While the study did not evaluate protection against disease, findings on contraceptive effectiveness suggest that the female condom may offer HIV protection.

Even if the device prevents HIV transmission, there may be limitations to effective use. Some studies involving user satisfaction show the female condom is only moderately acceptable, because of characteristics such as appearance, the noise it makes during intercourse, slippage and how it feels during intercourse. However, many women in these studies liked the female condom despite these characteristics.

Some complaints about the male condom also hold true for the female version — reduction of sensitivity and embarrassment among users. As with male condoms, some men simply may not allow women to use female condoms. Price is another concern — it currently costs about three times that of the typical male condom.

Potential for re-use

Breakage rates for multiple use have not been documented thoroughly for the female condom, nor is its potential for re-use clearly understood. If the female condom can be used effectively more than once, its cost as a prevention strategy would be lower and more appealing. Proper cleaning for hygienic re-use, however, is a critical factor to consider.

JAVED AHMED

A DIAPHRAGM USED WITH SPERMICIDE PROTECTS AGAINST CERVICAL INFECTIONS, BUT STUDIES HAVE NOT DEMONSTRATED ITS EFFECTIVENESS AGAINST HIV.

A male condom should be discarded after its initial use, primarily because latex is not strong enough to assure effective re-use. Initial research suggests the plastic used for the female condom is more durable than latex. FHI will evaluate breakage rates associated with the female condom for re-use.

Using a female condom should reduce the risk of HIV transmission, but the extent of the risk reduction is not clear, says Dr. Herbert Peterson of the CDC. "Clearly, it would appear to be more effective than nothing," says Dr. Peterson of Atlanta, who emphasizes, however, that the extent of protection remains unknown. "Consistent and correct use of the male condom is a highly effective strategy for prevention of HIV transmission. In contrast, we do not have that same information for the vaginal pouch."

During FDA testimony, Dr. James Trussell, a demographer at Princeton University, offered a mathematical model that estimated the female condom's effectiveness in preventing HIV transmission. Assuming its effectiveness at preventing conception is the same as the effectiveness per coital act at preventing HIV transmission, the risk of transmission would be reduced by 93.9 percent.

Spermicide research

Compared with the female condom, there is more scientific evidence regarding the protective effect of spermicides. Results, however, are inconclusive.

Laboratory and animal research has shown nonoxynol-9, the most widely used spermicide, can destroy HIV. When used by women, however, results have been contradictory. Some studies indicate that spermicides do protect against HIV; others show no protective advantage.

Still other research suggests that spermicides may even encourage the spread of HIV indirectly — by causing vaginal irritation when used frequently or in high concentrations. Tiny tears in the vaginal tissue may allow a virus better access into the bloodstream.

It is not clear how much or how frequently spermicides can be used before the mucosal lining of the vagina becomes irritated. Most experts believe the evidence to date suggests that spermicides should not be promoted for use among women having several partners a day. Recent research by FHI and PROFAMILIA, a family planning organization in the Dominican Republic, concluded that women who use nonoxynol-9, or N-9, frequently may experience genital irritation.[6] The study found noticeable irritations among women using N-9 more than once daily.

The handful of studies that have tried to test the effect of N-9 on sexual transmission of HIV in human beings have offered contradictory results. Two FHI studies, one in Cameroon and another in Zambia, showed a benefit to using N-9 but the authors caution that the nature of their research means that the results could have been due to some factor other than N-9.

A study among prostitutes in Cameroon found that consistent use of N-9 vaginal suppositories reduced risk of HIV transmission by 80 percent when compared with women who were infrequent users.[7] In a similar study in Zambia, researchers report a 40 percent decrease in HIV transmission.[8]

These studies contradict an earlier clinical trial among prostitutes in Kenya that showed a nearly two-fold increase in transmission among users of sponges impregnated with N-9. The study's relevance has been questioned because of the very high dose of N-9 (1,000 mg), compared to other N-9 products (usually administered in 350 mg doses or less).

Dr. Stein, of Columbia University, suggests that the benefit of modest use of spermicides probably outweighs the risk. For 30 years, spermicides have been widely used with no suggestion that they increased the risk of any sexually transmitted diseases, she says. Indeed, there is evidence that they reduce some STDs. Even that protection may itself reduce HIV infection, since the presence of other STDs enhances HIV transmission.

A female-controlled method that is effective and appealing to users would be a very desirable addition to prevention efforts.

"Men and women don't abandon methods they are happy with," says Tony Young of the National Women's Health Network in Washington, a public interest group focusing on women's health issues.

"A new method that is supposedly less effective could actually be more effective for a particular woman, if she uses it regularly. Currently, far more women are completely unprotected against sexually transmitted diseases than are protected by male condoms."

— Sara Townsend

Footnotes

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Florida Teenagers Learn About AIDS, Teach Others

An innovative U.S. program draws upon similar projects pioneered by FHI in 26 countries.

BELLE GLADE, Fla., USA — Except for the clown suits adorned with condoms and a game called "Wheel of Decision," a recent weekend street festival in this Florida community looked like any other.

There were plenty of helium balloons afloat and a long line of children waiting to get their faces painted. At a place on Martin Luther King Boulevard where teenagers like to gather, a man playing recorded music chanted to the crowd between songs about the need to use condoms. Nearby, people waited in line to twirl the Wheel of Decision, a brightly-painted plywood wheel of chance similar to roulette.

DR. DEANNA JAMES, DIRECTOR OF BELLE GLADE'S COMMUNITY HEALTH CENTER.

SARA TOWNSEND / FHI

The wheel gave points for landing on "latex condom" or "monogamy." For losers, it stopped on such grim headings as "syphilis" or "HIV."

"We have to hope that they won't play those chances in their real lives," says Dr. Deanna James, director of the town's Carl L. Brumback Community Health Center. The wheel is part of the center's peer education project under way in this community, which is located in the nation's largest sugar producing region, a semi-tropical land of rich black soil within the Florida Everglades.

Funded by the American Foundation for AIDS Research, with technical assistance from FHI, the project uses teenagers to teach other teens about HIV prevention. It is designed to reduce risky sexual behaviors among Belle Glade adolescents ages 13 to 18. Because 97 percent of Belle Glade's HIV cases are among African-Americans and people from the Caribbean, particularly Haiti, the project targets youths from those ethnic groups.

A variety of factors, some of them poorly understood, has given Belle Glade a prevalence of HIV-infection comparable to the worst hit areas in the world. Estimates show one of every seven people living within one five-block area is HIV-positive. While the epidemic may seem to be self-contained within such a rural town, Belle Glade has an unusually high contact with transient people. During the harvest season, Belle Glade's population of 17,000 adds another 10,000 migrant workers who cut cane or harvest vegetables.

The spread of HIV in Belle Glade differs markedly from many other U.S. communities, where HIV has been typically transmitted among homosexual men or from contaminated needles shared by drug users. As in Africa and the Caribbean, transmission in Belle Glade occurs mostly through heterosexual intercourse.

"There is a great need in the United States for interventions that address the changing epidemic here," says Michael Welsh, who heads FHI's U.S. AIDS Prevention Initiative. A growing number of Americans are contracting HIV through heterosexual sex, he says.

Known as HEART, for the Health Education AIDS Research Team, the peer education effort in Belle Glade is fashioned after similar projects pioneered by FHI in 26 countries around the world — in the communities hardest hit by the epidemic in Africa, Latin America, the Caribbean and Asia. FHI is exploring prospects for similar work among at-risk populations in New York and Texas.

"The project taps into the power of peer persuasion and the power of face-to-face communication," Welsh says. "It is cost-effective because it relies on the peers, and potentially sustainable because it is driven by strong community support. We need to share lessons learned across international borders."

FHI's experience in Latin America and the Caribbean is highly relevant to the Florida community because of its close cultural link with the Caribbean. FHI has collaborated with organizations in Haiti, the Dominican Republic and Costa Rica on similar projects.

More challenging roles

Three levels of peer educators — trainee, educator and mentor — allow interested teenagers to advance into more challenging roles. "Trainees" qualify as "educators," for example, by demonstrating communication and negotiation skills and by showing knowledge about AIDS.

In addition to training peer leaders, the project emphasizes the importance of controlling sexually transmitted diseases (STDs). It operates a condom distribution system and a referral service for STD treatment. The project distributed more than 22,000 free condoms over four months in late 1992.

Despite initial local resistance to providing condoms to youths, HEART has established "condom depots" at places popular among teens, including Finney's, the hangout for teenagers on Martin Luther King Boulevard where the Wheel of Decision is a permanent fixture. A bar, pool hall and some parents' homes are among the other distribution points.

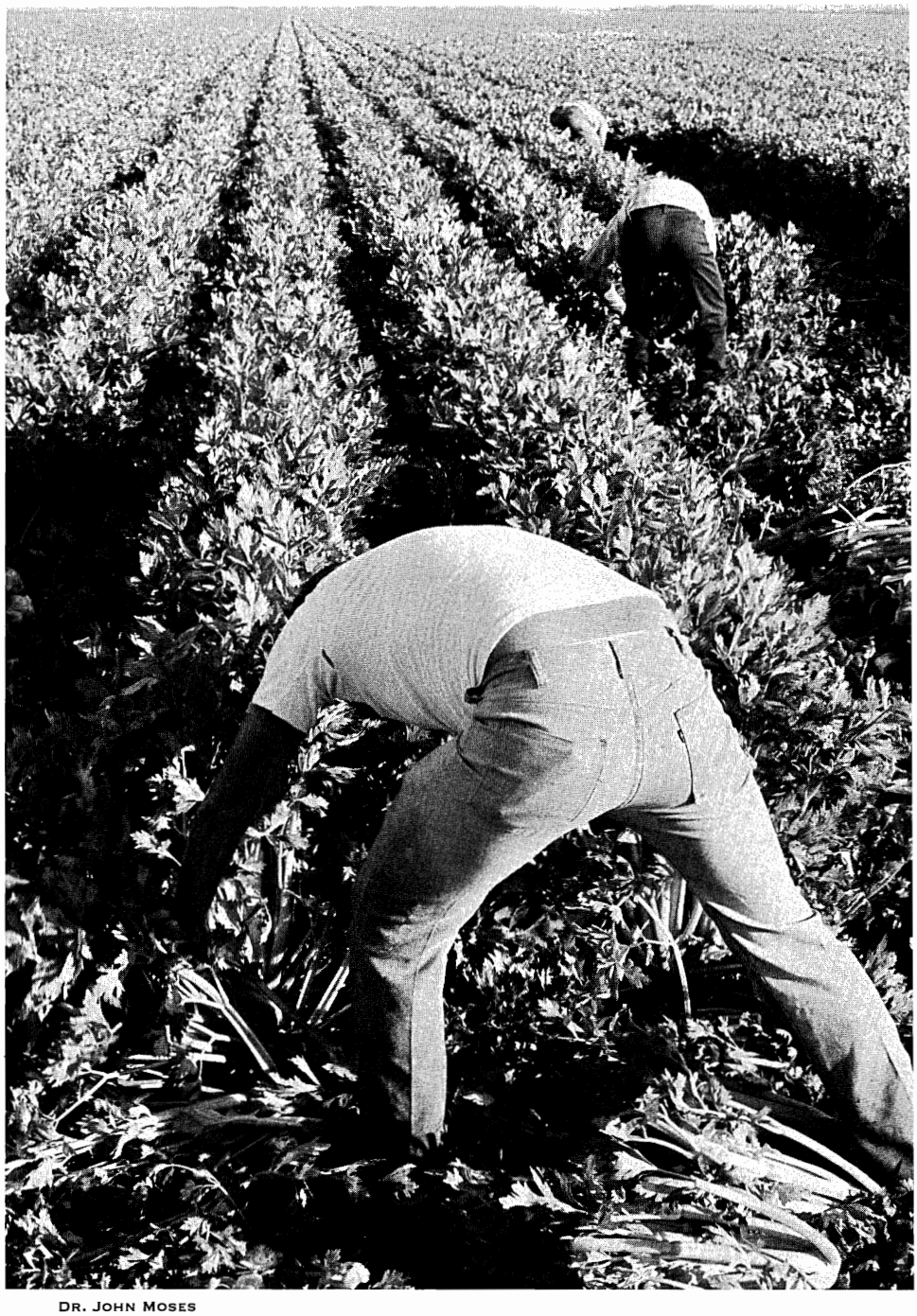
Teenage peer educators promote treatment of sexually transmitted diseases by urging friends to visit a "Teen Screen" clinic held weekly at Brumback Health Center. In addition, a clinic at Glades Central High School is available. The Wheel of Decision is often used at weekly meetings for peer educators at Finney's, where teenagers can learn more about AIDS and other STDs.

"When I hear my friends talking, I'm going to listen to what they say," says Jaime Wiggins, 13, a Lakeshore Middle School student and one of about 50 teens being trained in the project. "That's the only way to really change things."

Teenagers are more likely to heed warnings if they can identify with the person giving the message, says Myrlande Bastien, 18, a senior at Glades Central High who hopes to become a flight attendant or Spanish teacher.

"Because we are their peers, they listen to us," says Myrlande, another of the peer educators. But, she adds, simply "having kids trust you and believe what you say is true — that they should use condoms — doesn't mean they will be able to use condoms when they need to." Easy access to condoms is also important, she says.

Research findings are compatible with her views. Health and contraceptive considerations appear to play a minor role in a teenager's decision whether to use a condom.[1] Much more critical are the immediate discomforts that discourage use — embarrassment about buying condoms at a store, for example, or about discussing condom use with a partner.



DR. JOHN MOSES

FIELDS OF CELERY, SUCH AS THIS ONE OUTSIDE BELLE GLADE, ARE WORKED BY TEAMS OF MIGRANT FARM WORKERS.

A disease of the young

AIDS is a disease of the young in Belle Glade. Nearly one-quarter of HIV cases diagnosed in the area have been among children born to infected mothers or among adolescents, who typically contract HIV through sex.

With one in five girl students at the high school having a baby each year, Belle Glade has one of the highest teen pregnancy rates in

the nation. Adolescents in Belle Glade are at high risk of contracting HIV and other STDs through unprotected sex. Data from a 1992 survey by the HEART team and FHI underscore the need for AIDS education. Of the black and Haitian youths surveyed who were sexually active (ages 13 to 18), half believed they were at no risk of contracting HIV.

Children in Belle Glade grow up surrounded by vast fields of cane and vegetables, usually corn, beans and celery. The town itself is centered upon a half-mile strip of fast food restaurants, mobile home motels and pawnshops. Hand-painted signs on storefronts are often in Spanish or Haitian-Creole as well as in English.

During cutting season, Belle Glade's poorest neighborhood along the commercial strip becomes a crowded ghetto where drug use and prostitution are common and an extraordinary level of HIV prevalence exists. It is common for youths to know someone dying of AIDS.

In this social climate, many teenagers have joined HEART. The project is led by Dr. James and is run by five adult staff called "field supervisors," who help identify potential peer educators, train them and guide them after training. Of 51 teenagers recruited since the project began in the fall of 1992, 15 had fulfilled training criteria to become peer educators by early 1993.

Cathie Clements, one of the adult HEART supervisors, believes enthusiasm among the teenagers is not just the result of entertaining activities provided by the project's training sessions. "I think it has to do with these kids getting adult attention," she says, noting that many of the teenagers' parents are seasonal workers who spend long hours in the fields or packing plants.

"There's no secret here. HEART means love to these kids," says Blunzell Augustin, an African-American nurse's aide at the health center who works as a HEART field supervisor for 20 Haitian youths. She is married to a Haitian and lives in a Haitian neighborhood. "We've got to teach our children that it is cool to use a condom, to make them understand they have to if they want to live to have their own children."

Formal and informal training

The teenagers meet formally twice a week at the health center for training sessions. On nearly any night, many of them can also be found at Finney's, where rap music blares from homemade speakers and walls are papered with T-shirts designed by Lester Finney, the shop's operator and a HEART supervisor. There are opportunities to learn more about prevention and to counsel other youths.

"I'm beginning to see some changes," says Finney, the son of cane cutters. "Thinking about AIDS is becoming a norm among these kids. Wearing a condom may not be cool yet — but they understand it's something that's smart."

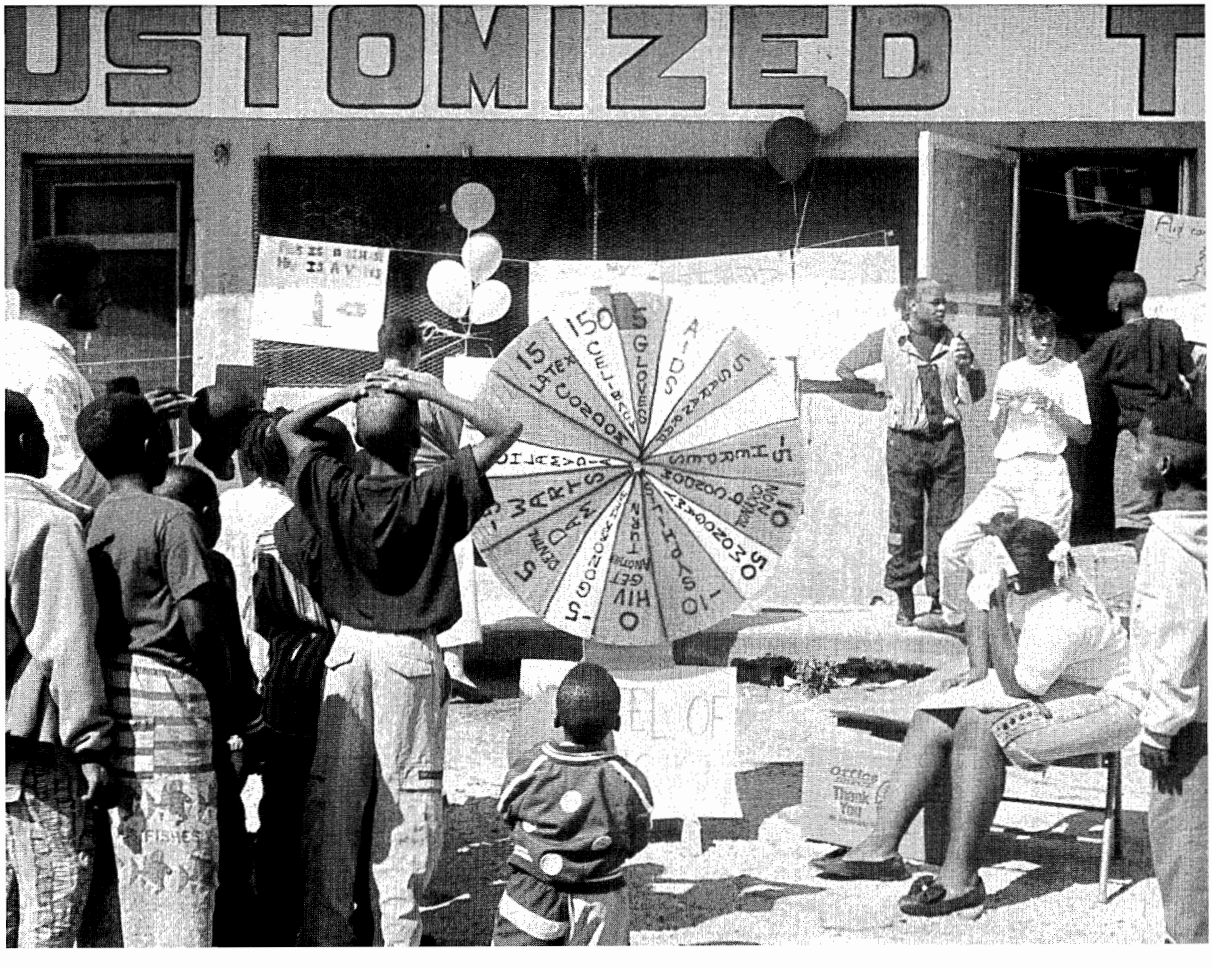
The appeal of formal training sessions at the health clinic may be less obvious. The key is simple: make the learning fun — even when learning about a disease that is killing people the teenagers know.

Music, videos, role plays and refreshments appear to be important factors in this project's early success, staff members say. The teenagers have performed skits, filmed video vignettes, created posters, composed rap songs and even designed their own logo for T-shirts.

In this town where gang membership, drug use and pregnancy are expected among teens, HEART offers a constructive alternative. Belle Glade is a town without a movie theater, youth recreation center or shopping mall. Few teenagers have access to automobiles and the bus to the nearest movie or mall — 45 minutes away — doesn't run on weekends.

But the HEART activities go beyond entertainment. There is a training manual to read and periodic tests. The teens submit HEART peer education report forms.

Adolescents in Belle Glade suffer from low literacy levels, low self-esteem and often



SARA TOWNSEND / FHI

AT A HEALTH FAIR IN BELLE GLADE, TEENAGERS PLAY A GAME CALLED "WHEEL OF DECISION" TO MAKE THEM THINK ABOUT HOW TO AVOID AIDS.

resist participating in organized programs. A critical step in the training, say project staff, is building self-esteem among the teenagers. Role playing is among the techniques used to cultivate self-esteem, while also conveying important messages about AIDS prevention.

The peer training manual, produced by project staff with FHI technical assistance, also addresses the multi-faceted needs of teenagers. The manual seeks to foster positive attitudes among the peers while imparting basic knowledge about AIDS and teaching skills in leadership and communication.

Among disadvantaged youths, the focus of a successful AIDS intervention effort must address their range of needs, says Henrietta Johnson, one of the field supervisors working closely with black youths. "Kids are talking about AIDS and they are seeing themselves at risk," says Johnson, who is a grandmother of three, "but the key is to focus on building self-esteem. So many of these kids have nothing, no sense of self-worth. They don't see any future for themselves and so if you offer them some hope, reinforcing that they are important, they are somebody, then you can help them set goals."

SARA TOWNSEND / FHI

HENRIETTA JOHNSON IS A FIELD SUPERVISOR WORKING WITH BLACK YOUTHS IN THE HEART PEER EDUCATION PROGRAM.

LESSONS LEARNED

Two lessons learned from FHI's experience with peer education projects overseas have proved essential to the Florida project: a focus on cultural sensitivity and attention to community outreach.

Recruitment of adult field supervisors who know the community and its language and are a part of its culture has been critical to success. "While I've been able to serve as a role model for cross-cultural unity, it's just human nature that the kids identify with and trust those who are more like them," explains Clements, a field supervisor who is white. The other supervisors are African-American.

Even the differences between blacks from American cultures and those from Haiti are significant enough to require different approaches. Knowing the language and cultural habits that put teenagers at risk helps identify effective AIDS prevention measures. Because of the strong family ties among Haitian youths, for example, it is important to keep Haitian parents well-informed about the project.

The other important lesson is community outreach. The HEART project faced initial resistance from community leaders and parents. Public events coordinated with other community organizations, including the Florida Association of Boys and Girls Clubs, helped to cultivate community support. Peer educators have also appeared in school classrooms and churches to speak about the project.

Leaders in the town's Haitian community were initially reluctant to allow Haitian teenagers to participate in a program involving condom education. Many Haitians associate condoms with promiscuity. In response to this concern, Dr. James chaired a number of meetings with Haitian community leaders to explain the purpose of the project and its relevance to public health. Other meetings featured a Creole-speaking physician who answered questions.

Yvette Charles, mother of a 12-year-old participant in HEART, applauds the project for empowering children to deal with the epidemic. Many of the children know people who have died of AIDS, she says, but that personal link is not enough to get teenagers to protect themselves.

"HEART makes them feel that they're learning what they need to know and it gives them the confidence to use what they're learning," she says.

Augustin, the field supervisor for Haitian youth, agrees: "This project is truly loved by the children. Now we have many more who want to be involved than we can handle."

FOOTNOTE

1. Kegeles S, Adler N, Irwin C. Adolescents and condoms, associations of beliefs with intentions to use. *Am Jour of Diseases of Children* 1989; 143: 911.

OPINION

Can AIDS Prevention Move to Sufficient Scale?

By Dr. Gary Slutkin

Chief, Office of Intervention Development and Support
World Health Organization/Global Programme on AIDS

Now well into the second decade of the AIDS pandemic, we have become much clearer on what interventions are effective and what an AIDS prevention program should look like. We know how to market condoms. We know that peer education needs to be developed for youth and high-risk populations. We know we need to use mass media and advertising in a regular and sustained way. We know more about what combinations of drugs are needed to treat sexually transmitted diseases (STDs) that enhance HIV transmission. We know we need rational and realistic policies, including national laws and local community decisions, that enable safer practices.

WHO

DR. GARY SLUTKIN

Evidence of effective interventions comes from national media programs in Switzerland and Holland, social marketing in Zaire and other countries, and peer education projects among sex workers and other groups. FHI supported several of these and other successful projects. But in most countries, programs with successful interventions and approaches have not yet been implemented to a large enough scale.

Applying effective interventions requires that important issues be worked out at the country level — for example, how to select and support peer educators, how to motivate programs to employ professionally designed mass media and advertising campaigns, and how to pay for such campaigns. There are also matters needing more broad-scale investigation, such as determining how to empower women in different cultural settings to protect themselves from infection and how to provide and pay for condoms and antibiotics.

In general, though, we know what a full-scale AIDS prevention program needs to be doing. An increasing number of national programs are beginning to use those interventions proven to be effective and are moving toward having full-scale national AIDS programs.

But most AIDS prevention programs do not have condom marketing, are not using mass media and advertising in a well-programmed way, do not

have peer projects to reach most at-risk populations and do not have systems in place to diagnose and treat persons with STDs. A lot more solid planning and resources are needed for AIDS prevention now, from both the public and the private sectors. To move to the necessary scale, national governments and international donors must become more committed, and the private sector must begin its role as a major participant.

The International Effort

Some signs of increasing participation and commitment are beginning to appear. Just five or six years ago, the World Health Organization's Global Programme on AIDS (WHO/GPA) was the only major United Nations agency involved in the AIDS prevention battle. Now there is much stronger participation and collaboration among international agencies, as well as governments and non-governmental organizations.

Among the United Nations agencies, UNICEF has begun to focus on youth and AIDS, and the United Nations Development Programme (UNDP) is mobilizing finance and planning sectors to join prevention efforts in various countries. WHO, UNICEF and UNESCO are all working more actively with schools and youth activities and are developing strategies and materials together. The World Bank has also taken a major step into the AIDS prevention field, including mobilizing non-health sectors and assisting in financing.

For the first time, the World Bank has begun to make substantial loans to governments for their use in AIDS prevention efforts. Traditionally, it has loaned countries money primarily for economic development. The bank has recently made a three-year loan of U.S. $150 million to the government of India and a loan of U.S. $250 million is under discussion for Brazil. In addition, it now has a list of potential countries that could receive such loans, making it a key partner in the global effort. WHO provides technical assistance at the country level, in conjunction with these loans.

The multilateral and UN effort, led by WHO/GPA, is now functioning in much more of a true, coordinated effort. It includes the full participation of the World Bank, UNDP, UNICEF, UNESCO and UNFPA (United Nations Population Fund). We are hopeful that this united and coordinated effort will grow even stronger.

The Bilateral Response

Besides UN efforts, governments of the United States, Sweden, United Kingdom, Canada, Netherlands, Norway, Denmark, Japan, Germany, France and several other countries are contributing to WHO/GPA and to direct bilateral (i.e., government-to-government) AIDS prevention activities. Among these, the United States effort is especially strong, in that the U.S. Agency for International Development (USAID) is the largest single contributor to WHO/GPA and is also the largest bilateral program, led by the five-year $168 million AIDSCAP program administered by FHI that began in 1991. USAID has funded similar bilateral programs since 1987.

Within this complex international effort, USAID brings some particularly important technical elements, besides its substantial funding. It has wisely decided that AIDSCAP focus on a few specific countries. Within these countries, the AIDSCAP approach integrates condom distribution and marketing, STD prevention and control, and behavioral change and communication strategies through person-to-person and mass media approaches.

To develop and implement such a broad strategy requires a diverse and multi-disciplinary staff, which AIDSCAP has assembled. The AIDSCAP emphasis on evaluation is also very important. The focus on evaluation of the previous USAID projects has given us some of the key lessons and documentation of success on which to build and identified questions that need to be answered.

Increasing the Scale

What we need in the field now is to show that interventions can work on a larger scale and that feasible programs can be developed on a country-wide level. The most important thing AIDSCAP can accomplish is to demonstrate how behavior can be changed in a broad geographical area.

By focusing on a few countries and a few specific areas in these countries, and by focusing on evaluation, AIDSCAP can substantially contribute to the effort to learn and show what works on a larger scale. This will be an important step in demonstration, and projects will serve as important footholds for further national program development.

Policy-makers in all countries must now realize that we do have strategies, interventions and approaches to AIDS prevention that work. They must also realize that these methods are not being applied sufficiently.

Policy-makers and other analysts could think of the current juncture for AIDS prevention efforts worldwide in this way. There are basic elements to successful public health programs — a clear strategy, good management, political commitment and a stable financial base. We have the basic strategy now. Skills in managing AIDS prevention programs are developing. The WHO/GPA program managers training course, field tested in April, provides country field staff with clear guidance on both strategy and management.

But political and financial commitment is lacking. Most country programs not only have low funding but also less than two years of funding assured. Further, hardly any program or project has the multi-year stable funding needed to operate effectively. Neither the level of funding nor the long-term commitment is yet in hand.

USAID and AIDSCAP are essential parts of the overall global effort. They are providing funds for programs, they are demonstrating effectiveness of prevention strategies, and they are showing more about the level of funding that really will be needed for the prevention of AIDS. We at GPA support this work as an important step in the global effort to increase the scale of AIDS prevention activities.

Dr. Slutkin is chief of WHO/GPA's Intervention Development and Support Office, responsible for determining what works in AIDS prevention and care. WHO/GPA provides technical guidance and support to countries, other UN partners and a variety of organizations.

Preventing HIV Transmission In "Priority" Countries

The five-year AIDSCAP project is targeting strategic locations for condom distribution, behavior change messages and STD treatment.

Nigeria, a West African country of 90 million people, has a low HIV prevalence rate nationwide. But the AIDS epidemic is firmly established among some urban populations and in certain geographical areas. A targeted AIDS prevention program could play a pivotal role in slowing the epidemic there.

With this in mind, AIDSCAP/FHI has developed an intervention plan that focuses around Lagos, the teeming financial capital of 5 million people, and in two states, Cross River and Jigawa. The plan involves a three-part strategy: increasing condom demand and accessibility, altering sexual behaviors that carry a high risk for HIV transmission, and reducing the prevalence of sexually transmitted diseases (STDs) that enhance HIV transmission.

AIDSCAP, which stands for the AIDS Control and Prevention Project, developed this plan through a careful and collaborative process, working with the Nigerian National AIDS Control Program, the U.S. Agency for International Development (USAID) Mission in Nigeria, international agencies and nongovernmental organizations active in AIDS prevention there, and other experts familiar with the complex elements at work in Nigeria.

Since AIDSCAP began in the fall of 1991, it has developed such intervention programs in 11 countries and has reached the final stages of negotiations for such programs in four other countries — a group of "priority" countries expected to total 15. To become a priority country, the USAID Mission in the country and the government must invite AIDSCAP to work there. The criteria for selection include: the HIV prevalence rate; the population size and distribution; the level of commitment to HIV prevention/control; the capacity in the country to respond to the AIDSCAP plan of action; the level of other donor support; and the USAID Mission's development priorities.

Another critical requirement for "priority" status is that the USAID Mission in the country must commit substantial funds from its own budget to AIDSCAP. The USAID Mission in Nigeria, for example, has committed more than U.S. $9 million for five years. To supplement such contributions from the missions, AIDSCAP adds funds from its core budget. Under a five-year agreement that began in 1991, Mission contributions plus the core support are expected to total U.S. $168 million — the amount of the cooperative agreement awarded by USAID to AIDSCAP. The fully implemented AIDSCAP program could involve up to 200 staff, with more than half of them based in country or regional offices and the remaining persons at AIDSCAP headquarters near Washington.

AIDSCAP has a primary mission of reducing the rate of sexually transmitted HIV infection through its three-part strategy involving condoms, behavior change and STD prevention and control. The AIDSCAP mandate is to implement the intervention plans through in-country agencies in an effort to increase each country's capacity to control the epidemic.[1]

In addition, all projects are evaluated to determine which types of interventions are most effective for replication and how to improve current projects: working with truckers, prostitutes and their clients, men and women with STDs, youth and other targeted groups. Policies affecting AIDS prevention within government, business, religious and community institutions will be assessed and addressed in each country.

FHI

SCHOOL CHILDREN IN KENYA LEARN ABOUT AIDS THROUGH COMIC BOOKS.

Established as priority countries so far are Ethiopia, Kenya, Malawi, Nigeria, Rwanda and Senegal in Africa; Brazil, Haiti and Jamaica in Latin America and the Caribbean; and India and Thailand in Asia. In addition to the priority countries, AIDSCAP also provides limited assistance to seven other African countries, four in Latin America and one in Asia.[2]

The AIDSCAP budget is sufficient for working in limited geographical areas in priority countries. Successful projects may be replicated nationally. The Thailand project, for example, is functioning in the Bangkok metropolitan area; in Haiti, projects are concentrated in several urban areas. In India, the program is based in the southern state of Tamil Nadu, which contains about 47 million of India's 860 million people.

Strategy Takes Time

In its first AIDS technical support project, from 1987 to 1992, USAID worked in more than 70 developing countries through two cooperating agencies; FHI implemented the AIDSTECH project, and the Academy for Educational Development carried out the AIDSCOM project. The AIDSTECH project sought to reduce HIV transmission caused by blood transfusions as well as through sexual contact. With its second five-year project, USAID chose to combine aspects of the two projects into a single program, AIDSCAP, focusing on a smaller number of countries, selected geographical areas within each country, and the prevention of sexual transmission of the virus.

"We have now entered the second decade of prevention strategies worldwide," says Dr. Peter Lamptey, director of AIDSCAP. "Working with other AIDS experts worldwide, AIDSCAP has helped develop a more thorough strategic approach to prevention. At the same time, we are proceeding as rapidly as possible with individual projects."

In June 1992, nine months into the AIDSCAP project, the U.S. General Accounting Office (GAO) published a report analyzing the efforts of USAID in AIDS prevention since 1987. In addition to addressing various agency-wide issues regarding HIV/AIDS prevention, the GAO identified three "potential

impediments" to AIDSCAP's success: "USAID has been slow to identify priority countries to receive project support; indicators to evaluate project impact have not been agreed upon; and no specific plans exist to meet the expected increase in condom demand."[3]

Now well into the second year of its program, AIDSCAP has worked with USAID to address the GAO concerns. Eleven priority countries have been determined and four others are being negotiated. Standardized indicators for monitoring and evaluating HIV/AIDS prevention and control programs have been refined to allow for comparisons to be made among countries. Progress has also been made to ensure condom supplies for AIDS prevention programs, both within USAID and with other donors.

Adding STD Control

From the beginning of the epidemic, most AIDS prevention projects have included condom promotion and behavior change as their cornerstones. Condoms have been shown to be highly reliable for prevention of HIV transmission, and people can be persuaded to change sexual behaviors that incur a high risk of infection.

"Changing any health behavior is difficult, but changing sexual behavior is especially tricky," says Dr. Thomas Coates, director of the Center for AIDS Prevention Studies (CAPS) at the University of California, San Francisco, one of the nine organizations that are working as part of the AIDSCAP team. "Any program that seeks to maintain safe behaviors over time needs to build in ways to reinforce messages and to help people moving into new environments maintain their behaviors once there." Such programs use interpersonal strategies, such as peer education, mass media campaigns and other techniques.

Pilot prevention campaigns have shown that people learn the importance of using condoms. "Even though condoms aren't widespread in Tanzania, they are now regularly used among truckers here," says Anne Outwater, AIDSCAP resident coordinator in Tanzania, where intervention projects have targeted truckers and barmaids along the east African highway that carries the virus along with trucks. As prevention efforts expand, more ambitious condom distribution efforts are needed among both public- and private-sector systems.

Now, along with condom use and behavior change, AIDSCAP has given an increased emphasis to STD control as an integral component for intervention plans. Research showing that the presence of STDs can enhance the transmission of HIV has resulted in new international attention and funding for control of STDs.

Until recently, many in the medical community considered the treatment of STDs a technical process requiring laboratories and highly trained personnel. However, many STDs can be diagnosed and treated quickly and inexpensively through a "syndrome-based" approach, now being introduced in Haiti, Cameroon, Kenya and other countries around the world. Under this method, health-care workers with limited training can diagnose and treat STDs based on a patient's signs and symptoms, without the need for laboratory tests.

Instead of using complicated laboratory equipment, they follow a simple flow chart of steps, often called an "algorithm." This approach allows large numbers of people to be screened and treated without an exact diagnosis of the disease-causing agent — if the causative agents most prevalent in an area have been identified and if antibiotics are readily available. Basic epidemiological research on STDs in a targeted area is essential in order to identify the most common strains and their susceptibility to available antibiotics; strains can vary significantly even within a single country. Often, the right antibiotics are not available.

Even under the best of circumstances, the syndrome-based approach has limitations, especially for women. For example, a woman with vaginal discharge may have any of several infections, including gonorrhea. Moreover, about 70 percent of women with gonorrhea have no symptoms. Hence, a system of referral centers with at least modest laboratory capabilities is also needed.

A comprehensive STD control system designed for AIDS prevention goes several steps further than diagnosis and treatment of individual STDs. It involves what experts now summarize as the "four C's:" *counseling* patients about behaviors that cause STDs, including AIDS; promoting the use of *condoms*; patient *compliance* with antibiotic treatment; and notifying and treating sexual *contacts* of STD patients seeking treatment.

The AIDSCAP project in Haiti is working in several of these areas. "There is strong outreach in this program," says Frieda Behets of the University of North Carolina, USA, one of the AIDSCAP partners working on STD management. "An STD referral center has been set up, which tries to convince patients to notify partners. But partner notification is still almost non-existent. People are reluctant to talk about sex and STDs."

AIDSCAP supports the Haiti project itself while also conducting research that has broader implications. Working with survey data and focus groups of pregnant women, "we are assessing women with vaginal discharge in relationship to other risk factors for STDs," explains Behets. "This may enable us to incor-

AIDSTECH / FHI

A PAGE FROM THE COMIC BOOK *EMMA SAYS: EACH TIME EVERY TIME!*

AIDSCAP Team Brings Diverse Experience to Task

Together with FHI, which is responsible for administering the AIDSCAP project, nine subcontractors are part of the AIDSCAP team. They are grouped below according to the aspect of AIDSCAP's strategy on which they are working.

Condom Promotion, Distribution and Logistics

• Population Services International

A nonprofit organization, PSI works in developing countries on communication, marketing and promotion campaigns for family planning, maternal and child health, and AIDS prevention. The world's largest condom social marketing agency, it is helping design and expand such efforts in most AIDSCAP priority countries.

• John Snow, Inc.

JSI has worked with USAID for many years on the logistics of delivering contraceptives within developing countries. For AIDSCAP, it is providing technical assistance as needed to priority countries regarding logistics management of condom supplies and STD diagnostic and treatment supplies.

Communication for Behavior Change

• Program for Appropriate Technology in Health

PATH has developed many health technologies used in developing countries. Under AIDSCAP, it develops counseling materials and trains people who will in turn train others. PATH communication and training offices work directly at AIDSCAP headquarters and regional offices. PATH also works with JSI on condom quality assurance and with the University of Washington on STD diagnostics.

• Ogilvy Adams & Rinehart

An international mass media and public relations firm, Ogilvy Adams & Rinehart has designed and implemented the U.S. Centers for Disease Control's America Responds to AIDS program. It helps AIDSCAP design and implement projects in the area of mass media and public education.

• Prospect Associates

Prospect Associates has worked with AIDS-related research with the National Institute for Allergies and Infectious Diseases and with the CDC-sponsored America Responds to AIDS program. It has developed an AIDSCAP training manual for STDs and advises AIDSCAP on communication issues.

• Center for AIDS Prevention Studies
University of California, San Francisco

A partnership of five agencies based in San Francisco, CAPS coordinates public policy and social science research projects in the United States and in developing countries. CAPS is coordinating the AIDSCAP behavioral science research with scholars in selected countries (including Brazil, Nigeria, Thailand and Jamaica) through international conferences, scientific publications and research projects.

Control of Sexually Transmitted Diseases

• University of North Carolina School of Medicine

Based in Chapel Hill, N.C., USA, this team of infectious disease experts has experience in basic sciences, such as microbiology and immunology, and community-based programs. They are assisting STD programs in developing countries.

• Institute of Tropical Medicine

Located in Antwerp, Belgium, the institute has a long history of public health work on STDs in African countries, where it is focusing its STD control work for AIDSCAP.

• University of Washington Center for AIDS and STDs

Based in Seattle, Wash., USA, the center has one of the largest STD research and clinical programs in the world. Its STD experts have worked in Africa, Asia and Latin America. They are providing assistance to overall AIDSCAP STD control.

porate certain risk factors into the algorithm for diagnosing vaginal discharge."

Developing more precise diagnostic tools and more reliable treatment facilities is important. But the biggest challenge for the AIDSCAP STD programs is identifying adequate resources for treatment, says Dr. King Holmes, director of the University of Washington Center for AIDS and STDs, another AIDSCAP partner. "I'm less concerned with the diagnostic problems than with drugs," says Dr. Holmes. "We're dependent on the drugs that are available, and no one has yet identified the resources available for drugs."

Expectations, Challenges

The challenges facing AIDSCAP are huge and require innovative and comprehensive approaches. For example, the STD experts are exploring what Dr. Holmes calls "periodic preventive treatment," where people at high risk for STDs are treated without using any diagnosis. "We are pushing within our AIDSCAP group to give the highest priority to doing operations research on this approach," says Dr. Holmes. "But we can't recommend this approach until it has been evaluated."

AIDS experts throughout the world have high expectations for AIDSCAP. Can large-scale condom social marketing programs be developed and sustained? Can effective strategies for changing high-risk behaviors be developed, implemented and sustained by in-country organizations? Will political and church leaders, among others, support AIDS prevention strategies for the next generation of young adults?

"We are under a microscope," says AIDSCAP's Dr. Lamptey. "We continue to make substantial progress, but we have great challenges ahead."

— William R. Finger

Footnotes

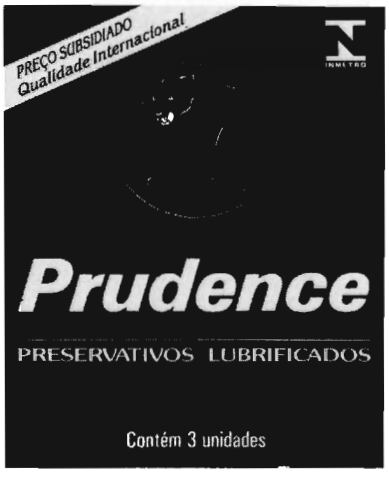
1. For more on the AIDSCAP philosophy and prevention approach, see "AIDSCAP — The Technical Strategy." Copies are available on a limited basis from AIDSCAP/FHI, Information Program, 2101 Wilson Blvd., Arlington, VA 22201 USA.

2. The countries currently receiving AIDSCAP assistance, referred to as "associate" countries, are: Burundi, Côte D'Ivoire, Lesotho, Mali, Niger, Republic of South Africa and Zimbabwe in Africa; Colombia, Costa Rica, Ecuador and Mexico in Latin America and the Caribbean; and Indonesia in Asia. Potential priority countries include Cameroon, Tanzania, Dominican Republic and Honduras.

3. *Foreign Assistance: Combatting HIV/AIDS in Developing Countries*, U.S. General Accounting Office Report to Congressional Requesters, GAO/NSIAD-92-244, June 1992, p. 3.

Condoms Becoming More Popular

Social marketing is encouraging more condom use to prevent HIV transmission, but sustaining such efforts raises new concerns.



In Africa, Latin America and Asia, millions more people are buying and using condoms than did so only a few years ago. Even in countries where they were rarely used before, condoms are becoming popular.

Driving this new demand are a variety of condom promotion campaigns that emphasizes AIDS prevention. If condoms are promoted and distributed properly, people seem willing to buy them. But as the AIDS epidemic marches on, experts are concerned that sustaining promotional efforts will become more difficult.

Advertising, product promotions and attractive pricing structures are part of one approach called social marketing. "Social marketing" refers to a strategy that addresses a public health problem with private-sector marketing and sales techniques. Condom social marketing programs, which are generally subsidized, often provide condoms at low prices.

In countries where aggressive social marketing campaigns have been developed, such as Cameroon in West Africa, the number of condoms distributed has skyrocketed. About 5 million condoms were distributed in Cameroon last year, more than 12 times the number provided in 1989.

Such efforts helped account for 1 billion condoms distributed in developing countries last year by international donors. Social marketing programs in almost 40 countries sold about 350 million condoms while another 650 million were distributed free of charge through public clinics in developing countries. (These numbers include condoms distributed by programs working primarily in family planning.) The major donors are the U.S. Agency for International Development (USAID), World Health Organization (WHO), United Nations Population Fund, International Planned Parenthood Federation and most recently, the World Bank and the European Community.

"Both the public and private distribution systems are vital to halting the spread of AIDS," says Glenn Wasek of John Snow Inc., which works with USAID on logistics management for condoms and other health supplies. "The role of each system varies depending upon the country. We need to be able to recognize how each can work to its best advantage."

Free distribution

Free public distribution of condoms has sometimes been effective in prevention efforts. For example, in the late 1980s, HIV was spreading rapidly among prostitutes in Thailand, where some 100,000 females work in commercial sex. Thai government officials were able to address the problem because of their experiences with an effective, nationwide system of family planning clinics and a similar system of treatment facilities for sexually transmitted diseases.

The Ministry of Public Health began placing a box of 100 condoms in every brothel bedroom in the northern provinces, where tourism is popular, and replacing them as needed. It also began other innovative programs (see article, page 30). Currently, the government distributes about 60 million condoms a year, says Tony Bennett, FHI resident advisor in Bangkok.

"Having free condoms available through public health delivery systems is essential for the very poor," says William Schellstede, FHI executive vice-president and a veteran of condom distribution programs. "Also, some people have natural initial contact with condom distribution through public clinics, such as people seeking treatment for sexually transmitted diseases."

"But people don't tend to go back to clinics once they are through with treatment," says Schellstede. "If we expect people to keep using condoms, we need to have social marketing programs in place."

Marketing condoms

In many countries, especially in Africa, AIDS has triggered the rapid growth of subsidized social marketing programs. In 1987, the Zaire National AIDS Committee launched the first condom social marketing program designed specifically for AIDS prevention, working with the nonprofit organization Population Services International (PSI). In just four years, sales grew to 18 million condoms per year. The Prudence brand condom became a familiar product, available everywhere from riverboats on the Congo River to rock concerts in Kinshasa, the capital. The program has become a model for nearly a dozen similar efforts in Africa.

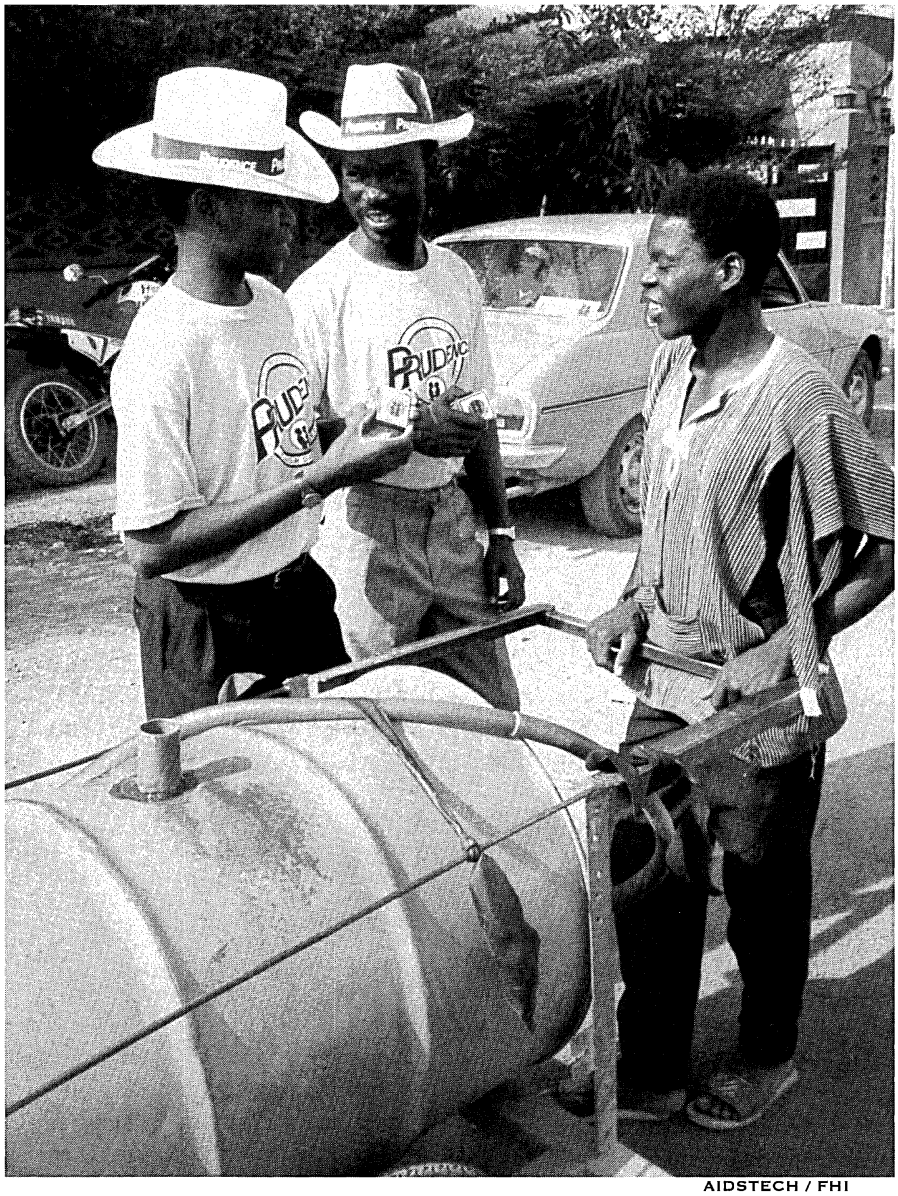
One of the African countries influenced by Zaire's success was Cameroon, where 5 million condoms were distributed last year. In 1989 the National AIDS Control Program, working with PSI and FHI, established the Cameroon Social Marketing Program. At that point, fewer than 400,000 condoms were being distributed free through public clinics in the country of 11 million people.

"The clinics are widely scattered around the country and only open during working hours," says PSI's Tim Manchester, based in Cameroon. "They are not a convenient source of condoms. Plus, people have to register and give personal information just to get a condom, which is not true in the open market."

To broaden the demand and availability of condoms, the Cameroon program turned to what experts call the four "p's" of social marketing: *product*, *place*, *price* and *promotion*. Market research showed the need for two products, a standard condom and an upscale brand.

Prudence Plus is targeted to young, working class males and sold through non-traditional outlets including street vendors, bars and hotels. A package of four costs about 18 U.S. cents. Promesse condoms, nearly three times as expensive, are marketed through pharmacies to better educated, affluent and married men. Prudence Plus is provided to at least 2,000 distribution points, and Promesse goes nationwide through wholesale pharmaceutical distributors. Both brands have been aggressively promoted through radio and newspaper ads, bumper stickers, posters and trucks with sound systems.

"Three to five years ago, people said that Africans would not buy or use condoms," says Manchester. Now, many African countries appear to be headed for rapid expansion of condom sales.



AIDSTECH / FHI

THE PRUDENCE SOCIAL MARKETING PROGRAM IN BURKINA FASO.

"It's really important to have a social marketing program here in Tanzania," says Ann Outwater of FHI, who has experience in AIDS prevention projects in this East African country. "Currently, condoms come into Dares-Salaam on the coast but can't get out across the country, to the bars and hotels where they're needed."

Based on the success of pilot projects, there appear to be ample incentives for such a program to work. "Peer health educators, including commercial sex workers and bar owners, want the program because they can supplement their income selling condoms," explains Outwater. "Pharmacists are eager to be a part of such a program too." AIDSCAP is working with the Tanzania National AIDS Control Program, PSI and others to determine if a condom social marketing program can be developed as part of a comprehensive AIDS prevention effort.

Government involvement can sometimes be helpful, especially as a social marketing program gets established. "In Burkina Faso, for example, when the program moved into a new region of the country, the social marketing staff and government officials met to discuss and shape details," says Jim Spilsbury of FHI, who has worked with AIDS prevention projects in several African countries.

FHI

SIGN AT A BROTHEL PARTICIPATING IN THE "100 PERCENT" CONDOM PROJECT

"This helped the project be accepted and welcomed by the local government leaders."

Given limited resources in all AIDS prevention campaigns, launching a social marketing program may not be appropriate in all areas. "There is really no need for a social marketing program here because government condoms are widely available, and drugstores offer condoms in a range of prices," says FHI's Bennett in Thailand.

SUSTAINING PROGRAMS

The success of social marketing of condoms has raised many questions. Perhaps the most important is whether cost-recovery efforts can help sustain these programs over the long run. Managers of donor agencies say that if demand for condoms continues to increase, as they hope it will, their organizations will not have the financial resources to provide all the condoms developing countries need.

"We actively support private-sector programs, cost-recovery efforts, and public-sector free distribution programs," says Mark Rilling of USAID's Office of Population. "Some of the condoms we provide for free public distribution are actually sold by public institutions in their own cost-recovery effort. Proceeds from the sale of donated contraceptives do not revert to USAID but are used by the local program to cover overhead, operating expenses, advertising and other costs. The result for us is that it reduces the amount of money we have to give to the in-country program just to keep it going."

The truly indigent should always be able to receive free condoms, says Rilling, but many people who are used to receiving free condoms are showing a willingness to pay for them if they are priced low and heavily promoted.

In Haiti, a host of nonprofit organizations instituted programs in the late 1980s providing free condoms to prostitutes and sexually active residents of city slums. In 1989, PSI launched a condom social marketing program in Haiti targeted at the general population. Promotional efforts were so successful that clients who formerly received free condoms opted instead to buy condoms through the social marketing program.

"Now, most of those organizations previously engaged in free distribution have switched to social marketing, either exclusively or mostly, with little opposition from clients," says Bob Clark, director of PSI's social marketing program in Haiti. Field interviews indicate that prostitutes have little preference between free or purchased condoms, says Clark. "All but the most impoverished are willing to buy."

How much can one charge for condoms and still make condoms affordable to most buyers? Population Action International (formerly Population Crisis Committee) and other organizations have examined the relationship between pricing and total sales. Generally, researchers agree that a social marketing program must charge for 100 condoms no more than 1 percent of a country's per-capita Gross National Product in order to meet the sales goal used by PSI — an amount of condoms equal to at least one half of the adult male population. In most cases, that price is not enough to cover all program costs.

Promotional activities, as well as packaging and distributing the condoms, are major program expenses. In Cameroon, for example, USAID and WHO supply the condoms free of charge, but the local program repackages them to match its promotional efforts. "The total promotional costs have never been calculated," says PSI's Manchester. "This program is an investment in AIDS control, and if you increase the price enough to make it pay for itself, you lose clients."

Some social marketing programs are designed to become self-sustaining, including projects run by The Futures Group with USAID funding. These programs work best in countries with a relatively high per-capita income, such as Jamaica, where higher prices can be charged. As condoms become accepted as everyday consumer products in such countries, demand could increase sufficiently to attract private companies into the market. This has happened, for example, in Colombia and Mexico, reducing the need for subsidies. Most condom distribution programs, however, will need to be subsidized on an ongoing basis.

LOGISTICAL PROBLEMS

In many countries, public sector programs are prone to logistical management problems that can hamper their ability to meet the rising demand for condoms. Not only is condom distribution increasing rapidly, but storage of condoms is more complicated than for pills or IUDs.

Cool, dry, well-ventilated storage areas are required for condoms. Even with good storage, condoms that are more than two years old should be sampled for reliability tests. Condoms more than five years old should not be used at all.

Despite its experience with various contraceptive commodities, the Thailand public health program was not prepared for the number of condoms needed as its program expanded. In 1990, condom stocks ran out due to a lack of careful monitoring. To address the problem, FHI helped support logistics training for health ministry staff. A computer tracking system was established that has helped prevent future stock shortages.

"We need to make sure that logistical systems are operating properly before we go about increasing condom demands," says FHI's Schellstede. "It does no good to ship huge numbers of condoms to programs that aren't equipped to handle them."

Another issue involves proper education on how to use a condom. To be cost-effective and efficient, programs need to reach people with clear information on the proper use of condoms.

—John Manuel

Mr. Manuel, a North Carolina-based freelance writer, has written for Network *on condom reliability and condom contraceptive use.*

Searching for an AIDS Cure

Vaccine and drug research is under way on many fronts, but complex challenges suggest a cure is years away.

Vaccines stimulate the body's own immune system to fight infection. But when, if ever, will life-saving vaccines be available in the battle against AIDS? Although recent findings have given scientists new hope, most agree that only with luck will some type of vaccine be widely available for use by the end of the century.

"We have a long way to go, both scientifically and in terms of clinical trials, before we have a vaccine that will work," says Dr. Robert T. Schooley, head of infectious diseases at the University of Colorado Health Sciences Center in Denver, Colo.

The AIDS virus has been notoriously difficult to combat. From the beginning, researchers have been stymied by its complexity, notably by the virus's ability to mutate or change into new strains at an unusually high rate, making it difficult to treat the infection or to develop a vaccine. There are at least five major groups of HIV strains and each group may require at least one type of vaccine.

"In some places, including parts of Central Africa, all five groups [of HIV strains] might be represented," explains Dr. Patricia Fast, who heads the preventive HIV vaccine clinical trials effort in the Division of AIDS at the U.S. National Institute of Allergy and Infectious Diseases (NIAID) outside of Washington.

Currently, more than 20 experimental HIV vaccines are being evaluated in small, preliminary studies in human volunteers. Many more agents are being tested in the laboratory. Successful vaccines would be used in one of two ways: as prophylactic vaccines, aimed at stimulating immune responses in uninfected individuals to protect them from infection on exposure to the AIDS virus; and therapeutic vaccines, given to individuals already infected with HIV to elicit immune responses that will interrupt progression of the disease.

A new three-drug treatment therapy for HIV-infected persons has also shown promise, but only in laboratory tests.

Several of the experimental vaccines are genetically engineered products, based on tiny fragments of the outer coat of the AIDS virus, known as gp120 or gp160 envelope proteins. So far, most of these candidate vaccines have been tested in early Phase I and Phase II studies, which examine only safety and early immune responses in small numbers of people. These trials suggest that most of the experimental vaccines cause no serious adverse effects and can stimulate infection-fighting antibodies.

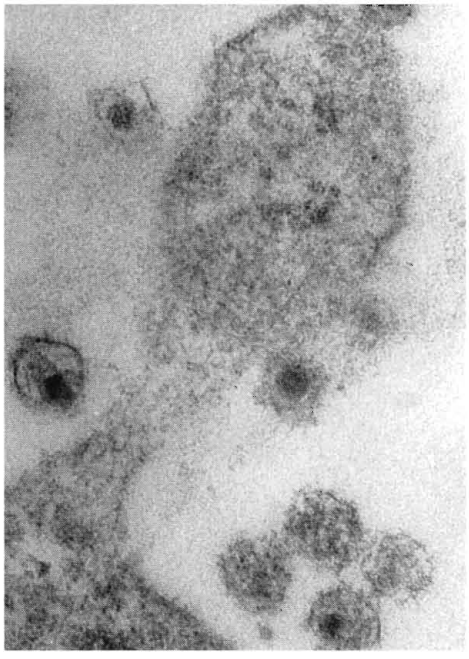
Scientists stress, however, that it will be several years before large-scale Phase III studies can confirm whether these vaccines actually work. A Phase III trial tests for efficacy and involves much larger numbers of people.

WILL MCINTYRE

ANTIVIRAL RESEARCH AT BURROUGHS WELLCOME CO.

PROPHYLACTIC VACCINES

Most of the vaccines under evaluation are being tested for preventive use. Among the most studied are gp120 products which, if successful, will cause the immune system to recognize the AIDS virus and attack it with killer antibodies. Small Phase I trials indicated that two of these gp120 vaccines have no serious side effects and induce some immune response against HIV. Larger Phase II studies have now begun, involving uninfected volunteers from populations hard hit by AIDS. These vaccine products do not use parts of the virus that can cause infection, so volunteers are not put in danger of infection through their partici-



DR. SARA E. MILLER / DUKE UNIVERSITY

T-CELL, IN CULTURE, INFECTED WITH HIV (MAGNIFIED 231,000 TIMES).

pation. All participants are counseled to avoid behavior that puts them at risk for acquiring HIV.

If results are encouraging, these gp120 vaccines may enter Phase III trials involving thousands of volunteers, which is the only way to measure their effectiveness. But this could be several years away. Preparing test sites, recruiting volunteers, resolving ethical, legal and political issues, and examining long-term results can take up to 10 years or more. It will also be important to test vaccines in countries where they will be used, since a vaccine that may be effective against strains found in one country may not work in another.

"Perhaps one day someone will be clever enough to develop a vaccine for the whole world," says Dr. Fast, "but we think it's more likely that we will be faced with the task of developing regional vaccines, which will be more complicated and difficult."

Another potential weapon against AIDS is known as a peptide vaccine. It contains a chemically synthesized protein fragment of HIV, known as a peptide, and has recently entered Phase I testing. Such a vaccine may provide protection against several strains of HIV. It also does not endanger human volunteers with infection.

"Peptide vaccines have two particular strengths," explains Dr. Margaret I. Johnston, acting director of NIAID's Division of AIDS. "They are inexpensive and relatively easy to modify to include new mixtures of peptides and those from different HIV strains."

With such flexibility, she says, peptide vaccines may be able to stimulate a broad range of immune responses to accommodate significant changes in a virus as they occur. There is also evidence that these vaccines may induce antibodies that can neutralize several HIV strains, making them particularly promising for use in developing countries. These experimental peptide vaccines, however, are still a long way from final testing.

Although none of the prophylactic vaccine candidates is currently being tested outside of Europe and North America, sites in South America, Africa and Asia are being readied with the help of the World Health Organization (WHO) to undertake large-scale studies when a potential vaccine is available. Development of a vaccine is one of the biggest priorities of WHO's Global Programme on AIDS (WHO/GPA), says Dr. David Heymann in Geneva, the organization's chief of research.

He adds, however, "It is difficult to say with certainty when vaccine efficacy trials will be done in developing countries.... We have to first understand how to motivate people to participate in trials without abandoning precautions against HIV. We also need to encourage vaccine manufacturers to develop vaccines that are thermostable — that do not require refrigerated transport or storage, and are therefore suitable for tropical countries — and that are effective with one dose, or a small primary series of doses, without a booster."

One recent finding may help achieve this last goal. U.S. scientists at the New England Regional Primate Research Center in Boston discovered that injections of an experimental vaccine prevent an HIV-like disease, called simian immunodeficiency virus (SIV), in monkeys. By using nearly the whole virus, researchers say, they are able to stimulate the animal's immune system for a more complete response than is usually possible with a vaccine made from a tiny piece of the viral envelope.

However, this vaccine uses live and potentially dangerous virus, unlike the other vaccine products. Hence, establishing the vaccine's safety is the key issue, says lead investigator Dr. Ron Desrosiers. Small human trials using an HIV vaccine based on this animal model could begin in a year or two. "But it can take up to 15 years before it completes final, large-scale safety testing," he says.

Unlike most of the other vaccines under scrutiny, this approach requires no booster shot. "If we're thinking of a cheap and easy vaccine for the Third World, this is it," says Dr. Desrosiers. "One shot protects for life."

HALTING AIDS: THE SEARCH FOR PREVENTION AND CURE

New drug combinations and more than 20 experimental vaccines are being evaluated to prevent or cure AIDS, but success remains at least several years away. The AIDS virus mutates rapidly, making vaccine development difficult and enabling HIV to develop drug resistance.

Prophylactic Vaccines

Vaccines made from nearly whole active viruses, viral proteins or protein fragments may immunize healthy individuals against AIDS before exposure to HIV. Small-scale tests showed that vaccines made from proteins have no serious side effects and induce some immune response against HIV. A live virus similar to HIV has been tested only in monkeys.

Therapeutic Vaccines

HIV-infected individuals may one day receive vaccines made from viral proteins or inactivated viruses, which would coax their immune systems into killing HIV. One protein vaccine is being tested on 1,000 Scandinavians, and results may be available by 1995.

Combined Drug Therapy

Researchers at Harvard Medical School have found that HIV replication is halted by a trio of drugs — AZT and ddI, both available for AIDS therapy, and the experimental agent pyridinone. Scientists have tried the combination in cell culture, and human tests have begun.

Therapeutic vaccines

While several successful preventive vaccines for other diseases now exist, such as those for smallpox and polio, only two so far can treat established infection: the vaccines for rabies and hepatitis B in infants of infected mothers. Both of these treat very early stages of infection. Proposed vaccine therapies for HIV, however, must target a disease already in progress.

In addition, therapeutic vaccines face the same challenges as the prophylactic candidates, including viral diversity and mutation. Despite these obstacles, several experimental therapeutic vaccines are being tested in small groups of HIV-infected people, including products made from gp120 and gp160. One gp160 product recently entered the first large-scale Phase III efficacy clinical trial. It involves 1,000 HIV-positive patients in Scandinavia, and researchers hope to know by 1995 whether this vaccine slows the progression of HIV to AIDS.

Most of the therapeutic products appear to be safe, and some seem to stimulate immune responses against HIV. However, there is no indication that these general immune responses can reduce or inhibit the AIDS viral burden or stabilize or improve the clinical status of infected patients.

"I don't think anyone knows how the future looks for therapeutic vaccines," notes Dr. Fast. "At best, they're going to keep people healthier for longer. At worst, they're not going to work at all.... If you take people who still have a fairly healthy immune response, they may not get sick for five or 10 years, so if you vaccinate them and they're not going to get sick for 10 years, it will take a long time to determine if the vaccine is working."

AIDS treatments

Although there is currently no cure or vaccine for AIDS, drugs known as antiretrovirals can help slow the progression of HIV infection and prolong the lives of some patients. These drugs use chemotherapy — not the body's immune system — to prolong the disease-free interval in asymptomatic patients, to reduce the distress in symptomatic patients and to delay death.

The oldest and best-known treament is zidovudine, or AZT, which is especially effective against the lethal AIDS-related *Pneumocystis carinii* pneumonia. This drug is expensive, however, and is generally not affordable in developing countries. Other such agents include ddI, ddC, D4T, AZdU and statvudine.

Even putting issues of expense aside, most of these products are hampered by side effects, and many people with AIDS develop resistance to the drugs, which makes the drugs ineffective. To overcome such shortcomings, researchers are looking into therapeutic approaches that use a combination of agents.

Recently, a young Harvard University medical student, Yung-Kang Chow, discovered that a combination of AZT, ddI and the experimental agent pyridinone eliminates the AIDS virus from human cells grown in test tubes. This unique three-drug strategy overcomes the problem of virus mutation by attacking a single target, an enzyme that makes copies of the viruses' genetic material. The enzyme becomes so mangled as it tries to fight off the three drugs simultaneously that it can no longer function properly and the virus cannot spread.

Called "convergent combination therapy," this strategy is now being tested in a few patients with advanced HIV infection. In March 1993, the NIAID announced that it is doubling the size of a proposed trial of this method, from 200 to 400 participants, and accelerating the timetable to start as soon as possible. Experts express caution, however.

"It may be years before this can be used in patients as regular treatment," warns Dr. Martin S. Hirsch, director of AIDS Research at the Massachusetts General Hospital in Boston, where the laboratory research took place. "What works in the laboratory does not always work as well, if at all, in patients. There's always the potential that these drugs will interact in unfavorable ways that we don't even understand yet." Also, there may be so many viruses in a person that some succeed in mutating into forms that resist all three drugs.

Even if one of the many experimental approaches currently under study is shown to work, making such a cure widely available involves enormous logistical problems, especially in developing countries.

Hence, it is crucial to practice the best prevention methods available — encouraging use of condoms, reducing sexually transmitted diseases and changing risky sexual behaviors such as multiple partners. Even if researchers find an effective vaccine or cure, prevention will continue to play an important role in controlling the AIDS epidemic.

"This is something we're in for the long haul," says Dr. Fast. "We really hope we'll find something in a few years, and as we're doing our trials, we'll continue to look for better vaccine candidates from every level, so that if the first candidates fail, we'll have second, third, and fourth generations to test."

— Dympna Burkhart

Ms. Burkhart of New York is a former editor of Medical Aspects of Human Sexuality. *She often writes on women's and reproductive health issues.*

"Mystery" Illness Not Linked to HIV

In the summer of 1992, a mysterious AIDS-like illness was widely reported in the world's press just prior to and during the Eighth International Conference on AIDS in Amsterdam. The people with the syndrome had markedly low levels of the white blood cell CD4+ T-lymphocyte but no signs of infection with HIV or related viruses.

Research recently published in *The New England Journal of Medicine* concludes that this syndrome of illnesses, called idiopathic CD4+ T-lymphocytopenia or ICL, is rare and is not linked to HIV or any other transmissible agent.[1] One research team reviewed more than 230,000 cases in the U.S. Centers for Disease Contol AIDS Reporting System and identified 47 possible persons with ICL. The team concluded that the rare disorder "represents various clinical and immunologic states. The investigation of [sexual, household and blood donor] contacts revealed no evidence of a new transmissible agent."[2]

An editorial in the journal by Dr. Anthony S. Fauci, director of the National Institute of Allergy and Infectious Diseases, concluded that ICL "is a rare syndrome; is not new; is not caused by HIV-1, HIV-2, HTLV-I or HTLV-II; is heterogeneous; is epidemiologically, clinically and immunologically rather different from HIV infection; and does not appear to be caused by a transmissible agent."[3]

Footnotes

1. N Engl J Med 1993; 328(6): 373-98.
2. Smith DK, Neal JJ, Holmberg SD, et al, Unexplained Opportunistic Infections and CD4+ T-Lymphocytopenia Without HIV Infection, an Investigation of Cases in the United States. N Engl J Med 1993; 328(6): 373-79.
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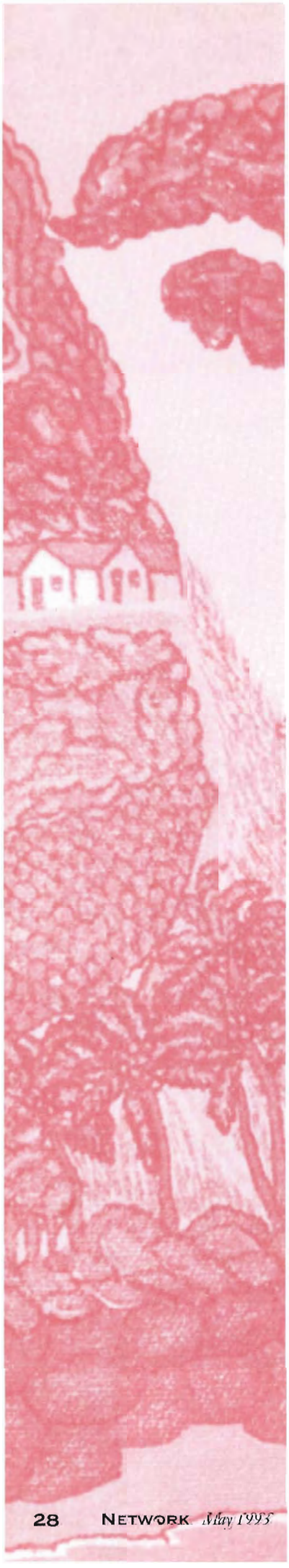

Helping Street Kids Cope with AIDS

RIO DE JANEIRO, Brazil — Leonardo da Costa knows Rio from the pavement up. His address is a shack in an outlying suburb where his mother and stepfather live, but in many ways the street is really his home.

Almost every day you can find the lean, quick-eyed teenager with fellow street kids begging spare change or hustling cigarettes from tourists, often within a stone's throw from a five-star hotel on Copacabana Beach.

Leonardo — Leo, to his friends — is 16, but with his spindly frame and modest height he could pass for 12. He is one of about 100 youths assisted by SOS Criança (SOS Children), which has sent psychologists and social workers to the plazas, alleys and subway stations where the myriad tribes of street children congregate. The group distributes condoms to Leo and other street children, counsels adolescent male and female prostitutes, schools them on their rights as minors, provides educational games to raise consciousness about health and helps the children improve their self-esteem.

After years on the streets of Copacabana, Leo knows how to handle himself. He also knows how to deal with a less visible sort of danger, the sort that comes from dirty needles or the bands of men who cruise the beach by night for young boys or girls. "Everybody I know is scared of AIDS," says Leo, furrowing his brow. "Everybody knows about the problem, but lots of people don't listen."

SOS Criança is one of dozens of nonprofit organizations in Brazil that have sprung up or expanded their missions in recent years to deal with the spread of AIDS. BEMFAM, the major nonprofit family planning agency in Brazil, has also become a leader in AIDS prevention, a significant step for a traditional family planning group.

Since the country's first AIDS victim was diagnosed in 1982, Brazil has been among the three or four countries in the world hit hardest by the epidemic. From the southern pampas to the Amazon in the north, more than 35,000 Brazilians have been diagnosed with AIDS, according to government figures. Some 425,000 of Brazil's 150 million people are currently HIV-positive.

Not all of the growing battalion of health-care professionals working in this field have found a listener as receptive as Leo. Brazilians have been reluctant to shed the notion that AIDS is the exclusive worry of discrete "risk groups" — such as homosexuals or drug addicts. Heterosexuals, and especially women, represent the fastest growing group of victims. In 1986, the ratio of male to female victims was 17 to 1. Now, according to Dr. Lair Guerra de Macedo, director of the Brazilian Health Ministry's Sexually Transmitted Disease Division, one of every six Brazilians infected with HIV is a woman.

Even after a decade of information and warnings about the virus, researchers have found an alarming lack of knowledge about AIDS and a veil of prejudices and myths among the public. Last year, a survey of youths ages 14 to 23 in three Brazilian cities (Rio, São Paulo and Porto Alegre) revealed a startling complacency to the spreading epidemic. The youths surveyed typically described HIV and AIDS as "a problem of the future," or "someone else's problem." Although 71 percent of those interviewed said they knew what methods to use to avoid getting HIV, only about one-third said they used condoms regularly or had changed their sexual behavior.

"The AIDS epidemic is out of control," says Richard Parker, who directs the Brazilian Association for the Integration and Dignity of AIDS Victims (ABIA). "All of the major modes of transmission are present here at the same time — through the blood supply, through sex and intravenous drug use. Meanwhile, risky behaviors continue. This is a potential public health disaster."

While the problem has burgeoned, so has the response. Brazil's health ministry has an aggressive STD program, run by Dr. Macedo, with regional programs in virtually all 27 Brazilian states. Com-

plementing the government response are nonprofit organizations, including BEMFAM, SOS Criança and ABIA.

Another successful nonprofit effort is the Centro Corsini in Campinas, in São Paulo state. Founded in 1986, it began as a mere foursome — two physicians and two interns — who met in a small house to assist adults with AIDS. Seven years later, the Centro has grown to a busy health-care center with a full-time staff of 22 physicians, physical therapists, dentists and social workers, using assistance from FHI and others.

Directed by Dr. Silvia Bellucci, an immunologist, the Centro now provides various services to more than 1,000 HIV-infected persons and AIDS patients, including diagnosis, day care for infected children, family counseling and dental care. It also provides preventive education for some 350 low-income mothers.

AMERICO VERMELHO

SOS CRIANÇA COUNSELS STREET KIDS AT RISK FOR CONTRACTING HIV.

FROM FAMILY PLANNING TO AIDS

For decades prior to the AIDS epidemic, BEMFAM focused entirely on family planning. Now with a professional staff of 200 physicians, nurses, social workers and psychologists, BEMFAM works on HIV prevention and safer sex as well as family planning and maternal health. In 1990, BEMFAM distributed more condoms than packages of birth control pills for the first time since it was founded in 1965. Last year, BEMFAM handed out 15.6 million condoms compared to 2.9 million packages of oral contraceptives.

"We realized the demand for information on AIDS was enormous, and the incorrect information glaring," says Dr. Ney Costa, BEMFAM medical director. Much of Dr. Costa's work involves training professionals to respond better to AIDS. BEMFAM collaborates with a network of more than 4,000 health workers throughout Brazil, and co-sponsors family and health planning programs in 13 states.

Much of BEMFAM's work involves channeling funding and educational resources to other organizations working with street kids, truck drivers and others particularly threatened with HIV infection. It also has developed innovative projects itself. For example, BEMFAM's social workers and nurses board merchant ships to hold safe-sex seminars for the seamen before they go ashore and plunge into Rio's alluring nightlife.

Another intriguing project is based in Vila Mimoza ("Affectionate Village"), one of Rio's largest and best known brothels. There, an inviting semi-nude woman stares from a colorful poster. "Come make love with me," she beckons. She is wearing a garter belt and no blouse. In her left hand, she holds a condom.

Along with the suggestive posters, information pamphlets on AIDS and sexual health tips are distributed about the Vila. All the working women are issued boxes of condoms free of charge every month. Regular blood tests for HIV and other sexually transmitted diseases are required.

The Vila has also launched a local radio program, Radio Mimoza. Between country and western music and the news, the use of condoms is encouraged through commercials and through jokes and anecdotes told by prostitutes.

A corridor of simple brick and plasterboard one-story houses, the Vila is tucked discreetly behind a high wall. On busy days, any one of the nearly 500 women working there may entertain 30 to 40 customers.

After three women associated with the Vila came down with HIV in 1989, "everybody was terrified," says Euridice Coelho Reis, director of Vila Mimoza, who spent 18 years as a streetwalker. For the women, she says, safe sex protects their lives and also offers job security.

"Our bodies are our instruments of labor," she says. "If we don't take care of them, we can't make a living."

— Mac Margolis

Mr. Margolis of Rio de Janeiro, Brazil, is author of The Last New World *(Norton 1992), a book about environmental and health issues in the Amazon region. He contributes regularly to* Newsweek, *a U.S. news magazine, and other publications.*

BEMFAM

SAFE-SEX POSTER DISPLAYED IN BROTHELS IN RIO.

"100 Percent" Condom Use Seeks to Slow HIV Spread

BANGKOK, Thailand — In less than four years, a nationwide condom promotion program among commercial sex establishments appears to have had an impact on the rapid spread of the AIDS epidemic here. Under the "100 percent" condom program, as it is called, operators of sex establishments instruct or require their workers to use condoms in all sexual encounters.

AIDS is one of Thailand's most important health problems, with some 450,000 persons now infected with HIV. The most important factor in heterosexual transmission here is the sex entertainment industry, which has some 100,000 female sex workers. Many Thai men frequent these establishments on a regular basis, and almost 100 percent of male patients with sexually transmitted diseases (STDs) report they contracted the infection from sex workers. Various STDs, including HIV, are transmitted from client to prostitute and then to other clients, who will further spread the disease to their wives and newborns.

Early in the AIDS epidemic, efforts to promote condom use in Thailand relied mainly on information, education and communication activities. Research showed that sex workers throughout Thailand wanted their clients to use condoms, but many clients refused. Some owners of sex establishments pressured prostitutes to accommodate these clients. Poverty, low education levels and subordinate social status leave many women with little power or freedom to refuse intercourse or insist on the use of a condom. This is particularly true for women who engage in sex for economic survival.

In August 1989, in the Ratchaburi province south of Bangkok, officials from the Ministry of Public Health, police and local government met with owners of all commercial sex establishments and provided information about AIDS. The owners were encouraged to withhold sex services to customers refusing condom use. Officials also explained how the program would be monitored and that penalties would be administered to uncooperative establishments. Penalties could include temporary and indefinite closure of these establishments by the police.

Government officials explained they would ask male clients attending STD clinics where their last sexual encounter with a prostitute was, thus exposing noncompliant establishments. Other steps would include: sending volunteers to test randomly how well sex workers were following the policy; observing STD infection rates among sex workers receiving routine examinations at local STD clinics; and monitoring the number of condoms provided to each sex establishment. Under the program, the officials explained, the sex industry could keep the same levels of income but reduce the detrimental consequences of HIV infection among their employees. That program expanded to other

(continued on page 32)

LANCE WOODRUFF

A MOTORCYCLE TAXI DRIVER IN BANGKOK WEARS A JACKET BEARING AN AIDS-PREVENTION MESSAGE.

AIDS Epidemic in Malawi: Shaking Cultural Foundations

BLANTYRE, Malawi — As the women wailed, men whispered under a nearby mango tree. The funeral procession of a prostitute was weaving through the outskirts of Blantyre, largest city in this East African country of 9 million.

After surviving for years on the streets, the 28-year-old woman died of complications due to HIV infection, following an agonizing three-month stay in a nearby hospital. Such deaths are becoming more routine among Malawi's young women and men. The deaths of so many young adults just entering their productive working years is raising concerns about the economic and social costs of AIDS.

"AIDS is shaking the very foundation of culture and tradition of a people, in addition to bringing untold suffering and anguish on the patients and their families," says Kwindimbule, a village headman. "It is threatening the collapse of the extended family, which has been the kingpin of the African society."

Malawi presents a sobering message for many countries threatened by rising HIV infection rates. Despite many types of intervention projects, the virus is spreading.

As in many African countries, there was an initial reluctance to talk about AIDS here. But in recent years, the National AIDS Control Program has coordinated a wide range of education and intervention campaigns. Today, more than 90 percent of the population knows of the existence of AIDS and its dangers, according to a recent study by the University of Malawi's Department of Chancellor College and Centre of Social Research.

"But this knowledge has not been translated into behavior change," says Anne Domatob, a World Health Organization (WHO) information specialist in Malawi.

Dr. George Liomba, head of the Malawi AIDS Control Program, estimates that as many as 10 percent of all adults in Malawi may be infected with HIV. The rate is higher in urban areas. One in three women at the prenatal clinic at the Queen Elisabeth Central Hospital in Blantyre is HIV-positive, according to a research team sponsored by The Johns Hopkins University School of Hygiene. "Changing behavior is the task facing us now," says Dr. Liomba.

Men Reluctant to Change

Early AIDS prevention campaigns sought to generate condom use through peer educators among bar girls, truck drivers and STD patients. Charity Zilima, 24, became a bar girl after her marriage broke up. With little education, it was the only opportunity available for her.

"Most of us young girls turn to prostitution because that is the easiest occupation we can get," says Zilima. "Decent jobs that would be available to us, if any at all, are very limited."

After being trained as a peer educator by a European Economic Community AIDS Project team, Zilima now educates other bar girls in Nsanje in southern Malawi on the dangers of AIDS and how to prevent it. Her training focuses on communicating effectively, negotiating safer sex and learning how to use condoms properly.

In Lilongwe, Malawi's capital, 94 percent of the bar maids trained as peer educators reported using condoms. Of those, 80 percent reported client acceptance. But such attitudes are not true throughout the country, even with commercial sex.

Many men prefer to have unprotected sex because they say sex with a condom is not exciting. Others drink alcohol and forget to use one, while others are ignorant of the dangers. "We have to drum some sense into their heads," says 21-year-old Adija Liundi, a prostitute at a resort area on Lake Malawi. "We women must carry condoms with us wherever we go and negotiate their use each time we meet a man."

The problem, concedes Liundi, is that in African culture, men are often the sexual decision makers and women simply followers. "If women

continue to play the submissive role, we will remain at most risk when it comes to HIV infection," she says. "We can make all the difference if we stand our ground and say emphatically to men, 'No condoms, no sex.' "

Some men willing to use a condom with girlfriends will not use one with their wives. They assume their wives are faithful and hence not a threat for HIV. "It is not only that my wife is faithful that I do not need to use a condom, it is also because we have to produce children," says Sheikh Amubaraka, a Muslim. He acknowledges, however, there is a problem when one or both partners are infected.

Another problem is mistrust. The partner proposing the use of a condom is thought to be promiscuous by the other. "So to avoid pointing accusing fingers, partners decide to have unprotected sex on the pretext that both of them are HIV free," says W.B. Chiwaya, Mangochi District AIDS coordinator.

"One of the best ways to slow HIV infection is to modify sexual behaviors that spread the virus," says Chief Mponda, head of a Muslim community. Although condoms have not been used within this community, they are now imperative for those who cannot abstain from having sex with unknown or unfaithful partners, he says. "This is the message I give my people."

Accessibility and Image

Making condoms readily accessible and giving them a positive image can help to change well-entrenched behaviors. For this to happen in Malawi, several problems will have to be addressed. First, some religious groups oppose condom use. Second, the distribution systems for condoms needs improving. Malawians get condoms free from the government through health centers and bars, or they purchase them from shops. The U.S. Agency for International Development (USAID) and WHO provide the condoms free of charge.

Due to various logistical problems, free condoms are not readily available in rural areas, where 90 percent of Malawians live. Some urban clinics are usually without condoms as well, and those with condoms can have other problems. "When we have asked for condoms, we have been accused of being promiscuous by the health staff," says Chrissie Banda, a divorcee with three children.

Most of the condoms on sale in shops are the Protector brand, distributed as part of a social marketing project funded by USAID. Because villages have found it hard to afford them, the project reduced the price by more than one-third, to MK 0.50 (about 10 U.S. cents) for a pack of three. But even then, some Malawians cannot afford them.

"We do not pay for sex here in the village, but now as we are required to purchase a condom, it is like we are paying for sex," says Mphala Tembo, who lives in a northern district. "What we need are free condoms."

Diverse Interventions Launched

Programs designed to support people infected with HIV can be a means of slowing the spread of the virus. "We hope we will contribute a lot in preventing the spread of AIDS in the country," says Isaac Jambo, who is HIV-positive and a founder of an AIDS support group.

The National AIDS Control Program and volunteer groups have also trained AIDS counselors, established anonymous HIV testing centers and begun broad-based counseling efforts. Health-care providers are working with 250,000 people in the Mulanje district, for example, counseling AIDS patients, persons with HIV, and their families.

Prevention projects have also begun among students. This year, some 200,000 books with teachers' guides on AIDS prevention have been produced for use in the curricula of primary and secondary schools, through a project supported by USAID and implemented by AIDSCOM/Academy for Educational Development.

Much of the religious community has also spread information about AIDS through the pulpit and home visits. Project Hope, a U.S.-based nonprofit group facilitating these efforts, has produced and distributed 20,000 copies of the booklet "What is AIDS?" in English and Chichewa, Malawi's national language. It has also trained some 1,300 Christian and 430 Muslim leaders to be peer educators and counselors. These men, women and youths have reached more than 50,000 people. In collaboration with the National AIDS Control Program and WHO/GPA, it has trained 206 peer educators from private industry and educated 60 company directors and general managers on HIV/AIDS prevention.

All of these efforts and many more are necessary, for Malawi is a diverse society. To slow the epidemic, a commitment to a nationwide prevention campaign will be necessary.

— Isaac Chirwa

Mr. Chirwa is deputy editor of the Malawi News.

"100 Percent" Condom Use

(continued from page 30)

provinces after it proved successful, according to four evaluation factors: the prevalence of STDs in the province; the prevalence of HIV infection in different target populations; attitudes and practices relating to condom use; and the rate of condom use in sex establishments. In 1991, the National AIDS Committee called for the nationwide expansion of the program, saying the governor, chief of police and chief medical officer of each province "will work together to enforce a condom-use-only policy that requires all commercial sex workers to use condoms with every customer."

The Ministry of Public Health followed this resolution with an order for all provincial chief medical officers to implement the program by January 1992, with every province required to make progress reports at three-month intervals. Since July 1992, all 73 provinces have reported the implementation of the program.

Some promising results have been observed in most of the provinces. There has been a marked increase in condom use in sex establishments to a level as high as 90 percent last summer. The incidence of STDs has decreased from 6.5 infections per 1,000 population in 1989 to 4.5, 3.2 and 2.1 in 1990, 1991 and 1992, respectively. The 1992 incidence is the lowest rate in the last 20 years. It is still early to detect a decrease in the incidence of HIV infection due to the program.

The "100 percent" condom program supports and empowers sex workers to be capable of controlling their actions. This should lead to the prevention of HIV infection among sex workers and their customers, and thus reduce the spread of HIV to the general population. The program should greatly reduce the sexual transmission of AIDS throughout Thailand.

— Dr. Wiwat Rojanapitayakorn

Dr. Wiwat directs the "100 percent" condom program for the Thailand Ministry of Public Health's AIDS Division.

Resources

SLIDE SET ON HIV INFECTION IN CHILDREN

A slide set designed for health professionals who care for HIV-infected children is available from Teaching-aids At Low Cost (TALC), a British nonprofit organization.

The 48-slide set, which includes a script in English, deals with transmission, management and other aspects of HIV infection. It also addresses concerns of pregnant and postpartum women who carry the virus and offers information on counseling and community care.

A prepared slide set costs £13, while a filmstrip and slide frames for mounting cost £9.60. The price is £2 less in developing countries. To order the set, write: Teaching-aids At Low Cost, P.O. Box 49, St. Albans, Herts. AL14AX, United Kingdom.

PAHO BOOK ON BEHAVIORAL INTERVENTION

Portfolio of AIDS/STD Behavioral Interventions and Research, a compilation of experiences from countries in Latin America, the Caribbean and North America, has been published by the Pan American Health Organization (PAHO).

The 314-page monograph includes sections on youth, women, homosexuals, hard-to-reach groups and substance abuse, with reports in English, French, Spanish and Portuguese.

To order a free copy of the 1992 publication, write: Dr. Lydia Bond, Pan American Health Oganization, 525 Twenty-third St. NW, Washington, D.C. 20037, USA.

FHI MATERIALS ON AIDS

Family Health International has produced a series of materials to help program managers, health professionals and outreach workers cope with the AIDS epidemic:

• A flip chart for educating African women about STDs and AIDS emphasizes condom use and prompt medical treatment and is available in English or French. Called "Emma Says: Each Time Every Time!," the colorful series of cartoons comes in a large binder suitable for displaying the drawings to groups. It tells three women's stories and poses questions to readers about protecting themselves against STDs and AIDS.

• "The Project Manager's Condom Information Packet" contains instructional booklets, in English or French, describing how to estimate needs, maintain supplies and assure quality of condoms.

• *Tools for Project Evaluation: A Guide for Evaluating AIDS Prevention Interventions* contains sample questionnaires, evaluation forms and surveys for use by program managers. The 95-page booklet is available in English or Spanish.

• *AIDS/STD Education and Counseling Training Manual* guides trainers through a series of exercises designed to improve their effectiveness at counseling clients. The booklet is available in English, and a version adapted for Africa can be ordered in English or French.

The free materials, available on a limited basis, can be ordered by writing: Debbie Wade, Publications Assistant, Family Health International, P.O. Box 13950, Research Triangle Park, NC 27709, USA.

WHO PUBLICATIONS ON AIDS, CONDOM USE

Living with AIDS in the Community is a 57-page booklet produced in Uganda and published by the World Health Organization Global Programme on AIDS. Geared toward community groups in Africa, this 1992 publication includes chapters on self-care and coping with feelings about the disease. The booklet is available in English and French at no charge in developing countries and at a cost of U.S. $5.40 elsewhere.

WHO also has published the *Guide to Adapting Instructions on Condom Use*. The 49-page book includes flyers describing proper condom use. It is available in English, French and Spanish at no charge in developing countries. Elsewhere, the cost is U.S. $8.10.

To order the materials, contact: World Health Organization, Distribution and Sales Unit, 20 Avenue Appia, 1211 Geneva 27, Switzerland. Fax: 41-22-7910746. Phone: 41-22-7913264.

IPPF VIDEO EXPLORES AIDS

International Planned Parenthood Federation has produced a series of materials for HIV/AIDS education:

• A 43-minute video and two guides make up the *Unmasking AIDS* resource pack. In the video, young Londoners with different ethnic backgrounds develop and perform a masked drama about their attitudes toward AIDS. The two manuals (*Activities To Explore*, 100 pages, and *Unmasking AIDS*, 75 pages) describe exercises and methods that can be used for teaching groups about the disease. The resource set, available in English, costs U.S. $35 in developing countries and U.S. $55 elsewhere. Each manual separately is U.S. $10.

• *Talking AIDS* is a guide for outreach workers who teach communities about sexually transmitted diseases, HIV and AIDS. It answers questions about safer sex, HIV testing, infection control, caring for those with HIV infection and other issues. The guide also offers suggestions for involving the community in AIDS prevention. The 98-page manual, available in English, French, Spanish, Portuguese and Arabic, costs U.S. $4.

To order any of the materials, contact: International Planned Parenthood Federation Distribution Unit, Regent's College, P.O. Box 759, Inner Circle, Regent's Park, London NW1 4LQ, England.

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New FHI Publications

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