

AIDS CAPTIONS

FAMILY HEALTH INTERNATIONAL
VOLUME III, NUMBER 1



*STD Prevention:
New Challenges,
New Approaches*

Behavior Change Lowers HIV/STD Risk

Research from behavioral studies indicates that reducing high-risk sexual practices can sharply curtail the spread of AIDS, reported *The Lancet* in its March 16 issue.

A program requiring the use of condoms in San Francisco's gay sex clubs resulted in a near-perfect protected sex rate, according to Dr. Thomas Coates of the Center for AIDS Prevention Studies at the University of California, San Francisco. In a lecture at the National Institutes of Health, Coates also noted a dramatic reduction in STD rates in prevention programs in India and Thailand that taught condom negotiation skills to commercial sex workers.

Acknowledging that research on sexual behaviors is often hindered by political opposition to funding studies on sexuality, Coates nonetheless emphasized that "we're talking about things we didn't talk about 15 years ago."

Lower Fertility Among HIV-positive Women

HIV-positive women have a significantly lower pregnancy rate compared to HIV-negative women with no known exposure to STDs, according to one of the first studies investigating the links between fertility and seroprevalence in developing countries. The findings are important not only for projecting the demographic impact of AIDS, but also in estimating the number of orphans and HIV-infected infants and the future demand for treatment to prevent mother-child transmission.

In a March presentation in Washington, D.C., Dr. Ronald Gray of Johns Hopkins University described his research, based on a cohort of 5,000 women in the Rakai District of Uganda, 1,200 of whom were HIV-positive. The research found a 48 percent reduction in fertility in women infected with both HIV and other STDs.

Gray said that HIV-positive women experienced an increase of spontaneous abortions during pregnancy, but was not certain whether reduced pregnancy rates were due to fewer conceptions among HIV-positive women or possible biological damage from HIV and other STDs. He cited a study from Tanzania associating a higher risk of infertility resulting from HIV and another study reporting higher stillbirth rates in HIV-infected women.

Early HIV Complications in African Women

Researchers have discovered that pneumococcal disease may be among the earliest serious complications in HIV-infected women in sub-Saharan Africa, based on results of a study reported in the March 16 issue of *The Lancet*.

Dr. Charles F. Gilks and colleagues from the Center for Tropical Medicine at Oxford University followed a cohort of 719 female sex workers in Nairobi, Kenya, 587 of whom were infected with HIV. Among those who were seropositive, 79 had pneumococcal disease, compared to one in the HIV-negative group. The researchers were surprised to find that pneumococcal disease, not tuberculosis, was both the earliest and most common seri-

ous complication among the HIV-infected women in the study.

The researchers stressed that pneumococcal disease, which among this study's cohort included bacterial pneumonia, sinusitis and occult bacteraemia, is relatively treatable with antibiotics.

New AIDS Drugs Approved

Two new drugs for individuals infected with HIV have been approved for use by the U.S. Food and Drug Administration (FDA). Both are classified as protease inhibitors, which suppress HIV activity to improve the immune system's effectiveness.

Abbott Laboratories' Norvir, generically known as ritonavir, will be used for treatment of late-stage AIDS patients and for other HIV-infected individuals on a limited basis. During clinical trials, Merck & Co.'s Crixivan (indinavir) caused HIV to fall below detectable levels in more than 90 percent of the patients using the drug in combination with AZT and 3TC (lamivudine). Saquinavir, another protease inhibitor, has already received FDA approval and is on the market.

Both manufacturers announced immediate start-up of production and distribution of their respective products. Because of concern voiced by AIDS activists that drug prices are too high, Merck plans to sell Crixivan at a discount (U.S.\$12 per day, about 30 percent lower than comparable drugs), and will also provide it free to patients who cannot afford it, or help patients find reimbursement.

AIDS*captions* is published
 Three times a year by
 Family Health International's
 AIDS Control and Prevention (AIDSCAP)
 Project

AIDS*captions*
 Family Health International
 2101 Wilson Blvd., Suite 700
 Arlington, Virginia 22201 USA

Telephone: 703 • 516 • 9779
 Fax: 703 • 516 • 9781

**Associate Director
 for Information Programs**
 Mary O'Grady

Editor
 Kathleen Henry

Editor/Writer
 Margaret J. Dadian

Associate Editor
 Karen Sai

Graphic Designer
 Sandy Paul

Publication Assistants
 Michael Buja
 Diana Randall

Family Health International (FHI) is a
 nonprofit research and technical assistance
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 development, family planning, reproductive health
 and HIV/AIDS prevention around the world.

FHI implements the AIDSCAP Project in
 collaboration with:

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

John Snow, Inc.

Ogilvy Adams & Rinehart

Population Services International

The Program for
 Appropriate Technology in Health

Prospect Associates

The Institute for Tropical Medicine, Antwerp

The University of North Carolina at Chapel Hill

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AIDS*captions* is supported by the U.S. Agency
 for International Development (USAID) under
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Cover Photo:

Providing STD diagnosis and treatment at primary health care clinics like
 this one in El Salvador could reduce the severe health problems caused by
 unrecognized and untreated STDs among women.

Rick Reinhard/Impact Visuals

*Women wait their turn
at a clinic in
Dar es Salaam, Tanzania.*



Sean Sprague/Panos Pictures

STDs: The Burden and the Challenge

by Q. Monir Islam

Every year close to 333 million people worldwide contract a sexually transmitted disease (STD). Ranking among the top five diseases for which adults in developing countries seek health care, STDs are nearly as common as malaria.

Until recently, despite the overwhelming evidence of their devas-

tating impact on the health of women, children and youth, STDs have largely been ignored. Governments and international organizations are beginning to pay more attention to STDs such as gonorrhea, syphilis and chlamydial infection because of their role in enhancing another sexually transmitted infection, HIV (see page 8).

STD control is, however, important in its own right. As a result of unrecognized and untreated STDs, women suffer severe complications such as pelvic inflammatory disease (PID), ectopic pregnancy and infertility; men become sterile; and newborns are left blind. The majority of STDs are curable and all of them are preventable.

Prevalence and Impact

At least two dozen microbial agents and parasites can be transmitted by sexual contact. The best-known STD, HIV, strikes more than 2.7 million people a year—but that is only a small portion of the hundreds of millions of annual STD cases.

Many STDs produce similar signs and symptoms. The most common

STDs are the genital ulcer diseases—syphilis, chancroid and herpes—and those that cause vaginal or urethral discharge (gonorrhea, chlamydial infection and trichomoniasis). Reliable data about STDs in the developing world are scarce, but studies among women attending antenatal, family planning or gynecological clinics in some countries have found prevalence rates of almost 20 percent for gonorrhea and syphilis and up to 30 percent for trichomoniasis.

Young women are particularly vulnerable to STDs, but high rates of STDs are found among youth of both sexes. It is estimated that in developing countries, one in 20 youth contracts an STD each year and one-third of all STDs occur among 13- to 20-year-olds. Young people are at risk of serious complications of infection because they rarely have access to STD information and services (see page 21).

The World Bank estimates that for women 15 to 44 years old in developing countries, STDs not including HIV are the second leading cause of years of healthy life lost, af-



P. Almasay/WHO

Young people around the world are at risk of serious STD complications because they rarely receive adequate prevention education.

ter maternal morbidity and mortality. In men of the same age, HIV infection ranks first, before tuberculosis, motor vehicle injuries, and homicide and violence. All STDs, including HIV/AIDS, account for nearly 15 percent of years of healthy life lost in this critical age group.

STDs in the Developing World

Numerous prevalence surveys confirm that although STDs are a major public health problem worldwide, STD prevalence is highest in the developing world. Rates of syphilis among women, for example, may be up to 100 times higher in developing countries than industrialized countries.

The main reasons for these differences between developed and developing countries are poverty, lack of information about STDs and limited access to care. Poverty affects STD risk because a lack of employment opportunities in rural areas forces men to move to the cities for work. The resulting concentrations of men away from home quickly lead to increased demand for sexual services. While men living apart

from their families develop casual liaisons with sex workers, the women at home often have to turn to sex work to subsidize their incomes.

Economic and gender inequality also contribute to the higher rate of STDs among women in developing countries. In many cultures, women in both permanent and casual relationships have little or no control over the sexual behavior of their male partners and the use of condoms to prevent STD/HIV or pregnancy.

In addition, many women have symptomless STDs, do not recognize symptoms of STD or are too embarrassed to seek treatment. Stigmatization of people with STDs and cultural norms that discourage women from talking about sex or sexuality impede them from seeking the care they need even when it is available.

Maternal and Child Health

The burden of most STD complications falls on women and children. The consequences of STDs are more serious in women because of the risk

of infections ascending the reproductive tract, leading to PID, infertility and ectopic pregnancy, and because the infections can be transmitted to their children during pregnancy and childbirth.

Gonorrhea and chlamydial infection cause most PID, which involves inflammation of the uterus, fallopian tubes, ovaries or other pelvic structures. In some parts of Africa, the yearly incidence of PID has been estimated at 360 cases per 100,000 population. Without treatment, 55 to 85 percent of women with PID may lose their fertility—often without ever realizing they had the disease.

By permanently scarring and narrowing the fallopian tubes, PID increases the risk of ectopic pregnancy. The rate of ectopic pregnancy in Africa is about three times that found in industrial countries and remains an important cause of maternal mortality, especially in rural areas where access to critical care facilities is often lacking. Studies in developing countries have found that 1 to 15 percent of all maternal mortality is due to ectopic pregnancy.

Certain strains of the sexually transmitted human papillomavirus (HPV) can also lead to death in women. Worldwide, about 250,000 women die of cervical cancer annually.

STDs in women are a frequent cause of fetal loss and infant morbidity. They can result in spontaneous abortion, prematurity, low birth weight and stillbirth and can be passed on to unborn children, resulting in congenital syphilis, ophthalmia neonatorum (eye infections that, if untreated, can lead to blindness) and chlamydial neonatal pneumonia.

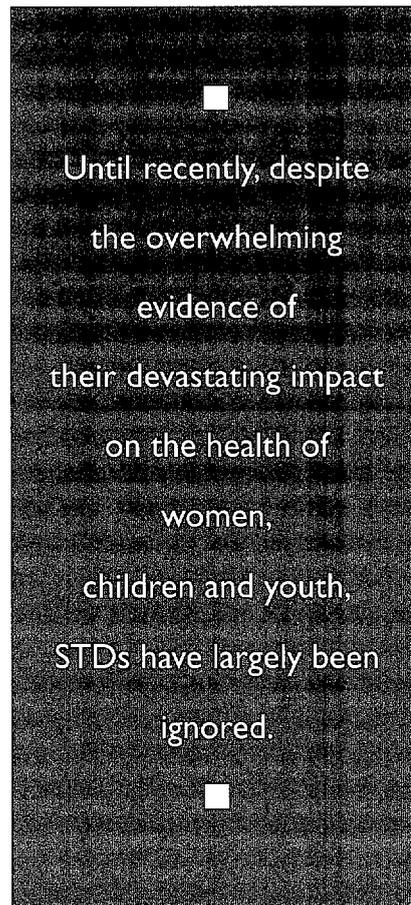
Obstacles to Care

Complications of STDs are more severe in the developing world because many people delay seeking treatment for sexually transmitted infections. Often people—particularly women—are not aware that they have an STD because they have no symptoms; others know they are infected but avoid seeking care because of the stigma associated with STDs. Many of those who do seek treatment self-medicate, and others go to traditional healers.

Why do people delay seeking treatment even when they recognize STD symptoms and have access to care? Some have no confidence in the formal health sector, either because they have had a bad experience at the local clinic or have heard that they can expect long waits, ineffective treatment, drug shortages, and rude or judgmental health workers. Others want to avoid the stigma associated with having an STD.

Unfortunately, patients' lack of confidence in the STD care provided by the formal health sector is often justified. The lack of rapid, inexpensive, accurate diagnostic tests for most STDs and shortages of drugs make it difficult for health care personnel in developing countries to provide quality care. Diagnosis by

clinical guess, despite its inaccuracy, is probably the most common approach because laboratory support is unavailable, unaffordable or impractical. Many providers prescribe ineffective drugs because they lack information about local patterns of drug resistance or do not have access to effective but also more expensive drugs.



The need for expensive drugs is driven by the rapid spread of resistance to STD drugs. This global problem is exacerbated in developing countries by high levels of incomplete or incorrect treatment with antibiotics, which allow STD pathogens to develop resistance to the drugs. In most developing countries, resistance of gonococci to penicillin and tetracycline has reached levels that make their use in gonorrhea treatment unacceptable. Resistance to more expensive categories of drugs is already beginning to develop.

A New Approach

A fundamental strategy of STD control programs is the early detection and treatment of disease, preferably during the first encounter between the patient and the health system. In many countries, STD patients are seen more often in private facilities (private physicians, clinics or pharmacies) and primary health care settings than in specialized STD clinics.

An effective and efficient STD control program should promote not only appropriate treatment-seeking behavior but rapid, inexpensive, accurate case management that can be implemented on a large scale by health providers with diverse levels of expertise. Ideally, health care providers should be trained to provide diagnosis and treatment during the initial visit and without laboratory support.

The syndromic approach to STD case management is being adopted in many developing countries because it facilitates one-stop treatment of STDs. With this approach, clinicians base diagnosis on a group of symptoms and treat for all diseases that could cause the syndrome (see page 9). Cure rates after treatment using syndromic management are 92 percent for urethral discharge, up to 100 percent for genital ulcers, and 80 to 91 percent for vaginal discharge.

In developing countries, the need for integrated services is acute. Eighty to 90 percent of the population in most of these countries depend on primary health care services. Because so few facilities are available for care and gaining access to services is usually time-consuming, it is important to provide as many services as possible at each facility. When clients make the effort to obtain one service, the full range of preventive and curative care should be offered. In Tanzania, improved and integrated STD care through primary health care services



A nurse at a health center in Lima, Peru, talks to three mothers about their infants' health. Integrating STD services with maternal and child health care is one option for improving women's access to STD diagnosis and treatment.

Jeremy Horner/UNICEF/93-BOU0705

reduced HIV incidence by 42 percent in one rural population in Tanzania (see page 14).

The individuals most at risk of sexually transmitted infection are often members of society's least powerful groups who are unlikely to have access to quality health care services. Programs that offer prevention education, condoms and affordable, effective diagnosis and treatment of STDs play a fundamental role in reducing the spread of STDs among these groups. In Calcutta, India, for example, an initiative that used peer education, condom distribution and provision of timely STD treatment in a "red light" district increased regular condom use among sex workers from almost zero to 42 percent in just one

year. In Thailand, as a result of the government's "100 Percent Condom" Program (see page 24), the five major STDs declined by 69 percent among sex workers and their clients in four years.

Overlapping health care needs in the developing world provide a unique opportunity to deliver STDs and HIV/AIDS prevention and care alongside other health care services. Service-based approaches, such as those offered by PROFAMILIA, the family planning association of Colombia, have shown that integrating family planning and STD services is feasible and beneficial to clients. In fact, the number of clients served by PROFAMILIA continues to increase each year.

The extent and severity of STDs,

especially among women, youth and children, and the interrelationships between STDs and HIV/AIDS suggest the need to include STD control in services such as maternal and child health care and family planning. Because of high clinic attendance in most developing countries, antenatal clinics may provide a particularly good opportunity to reduce the burden of STD and prevent HIV and other STDs. ■

Q. Monir Islam, MD, MPH, is the medical officer of the Family Planning and Population Unit of Family and Reproductive Health of the World Health Organization (WHO). Previously he was responsible for the Sexually Transmitted Diseases Programme of WHO's Global Programme on AIDS.

The STD-HIV Link

Sexually transmitted disease (STD) control has been an important AIDS prevention strategy for the past five years because infection with another STD is believed to increase the risk of transmitting or acquiring HIV. Many epidemiologic and biologic studies and one clinical trial of the impact of STD treatment on new HIV infections now support the hypothesis that STDs enhance HIV transmission.

In fact, it is estimated that the presence of an STD can increase the risk of HIV infection as much as tenfold.

Since the beginning of the AIDS epidemic, an association between STDs and HIV infection has been noted in the majority of epidemiologic studies that examined both. But these descriptive, snapshot (cross-sectional) studies were unable to establish which came first: HIV or another sexually transmitted infection.

A handful of prospective studies that followed people over time also found an association between having an STD and acquiring HIV infection. By demonstrating the temporal sequence of HIV and other STDs, these studies provide stronger evidence that STD increases HIV transmission.

The risk of HIV found in prospective studies was generally higher with genital ulcers (caused by syphilis, chancroid or herpes) than with vaginal or urethral discharge (gonorrhea or chlamydial infection). Since the discharge syndromes are more common than genital ulcer diseases, however, it is difficult to determine which has a greater impact on HIV transmission in a population.

The results of a community-based, randomized clinical trial published in August 1995 provide perhaps the clearest evidence so far that other STDs have a significant impact on HIV transmission. Researchers documented a 42 percent reduction in new HIV infections in communities where improved STD services were provided (see p. 14).

Biologic data to support these observational studies are accumulating. HIV has been identified in the genital tract and in secretions from genital ulcers in

both men and women. Several studies have shown that the shedding of HIV in genital fluids is increased by exudates from and the inflammatory response to sexually acquired infections, making HIV-positive persons more infective when they have an STD. When women have gonococcal or chlamydial infection, there is a disproportionate increase in CD4 lymphocytes (the white blood cells targeted by HIV) in the endocervix, which is the site of those infections.

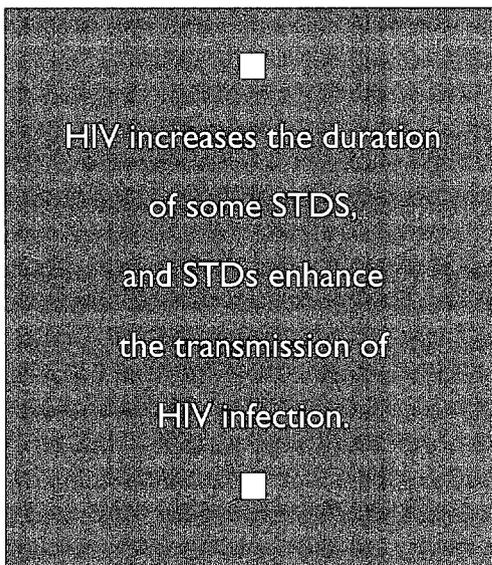
Several studies have shown that treating an STD can reduce the secretion of HIV. In one study, researchers could isolate HIV virus in only half as many HIV-positive men after treating them for gonorrhea. In another, there was a 100-fold decrease in the amount of virus that could be detected in the ejaculate of a man after treatment for chlamydial urethritis.

Compelling biologic and epidemiologic evidence suggests that STDs increase the efficiency of HIV transmission.

By altering the host's immune response, HIV may in turn change the course of some STDs. Curing the common ulcerative disease chancroid in HIV-infected people, for example, usually requires a seven-day course of antibiotics rather than the normal single dose. Herpes virus infections and human papillomavirus (wart virus) infections also can be more severe in those who are HIV-positive. The effect of HIV on syphilis is not clear; no effect on gonorrhea, trichomoniasis or chlamydial infection has been found.

Thus, there appears to be a synergistic relationship between HIV and STDs. HIV increases the duration of some STDs, and STDs appear to enhance the transmission of HIV infection. Prevention and treatment of STDs are clearly critical strategies for HIV prevention.

— Gina Dallabetta



HIV increases the duration
of some STDs,
and STDs enhance
the transmission of
HIV infection.

Gina Dallabetta, MD, is AIDSCAP's associate director of STD programs.



T. Farkas/WHO

An STD laboratory in Singapore. Syndromic management of STDs greatly curtails the need for expensive testing.

Syndromic Management: Promoting Effective STD Diagnosis in Resource-Poor Settings

by Margaret J. Dadian

Since the early 1980s, strong evidence has been building that infection with sexually transmitted diseases (STDs) significantly increases vulnerability to HIV. Health organizations worldwide have reacted with an upsurge of interest in STD prevention and treatment as critically important to curbing the spread of the HIV/AIDS epidemic.

Yet within developing countries, where STDs are a major health

problem, this discovery has been overshadowed by some tough economic facts of life. Many poor nations lack the funds, trained medical personnel and laboratory resources to test their citizens for STDs. For example, in sub-Saharan Africa, where STD prevalence rates are among the highest in the world, average per capita income is about U.S.\$450. STD lab tests, which can run as high as U.S.\$40, may be prohibitively expensive for both indi-

viduals and national health care systems.

Throughout the world, though, etiologic diagnosis, which depends on lab results to identify disease and determine treatment, has been the standard diagnostic method for formal health care providers. In settings where lab tests are unavailable or unaffordable, practitioners rely on their own experience with STD-infected patients to determine through patient history and exami-

nation which STD is causing the symptoms. This is called clinical diagnosis, and research has shown it to be of limited value in diagnosing STDs.¹

But with HIV spreading quickly, another approach was clearly needed. In 1988 the World Health Organization (WHO) began promoting an alternative to both etiologic and clinical diagnosis, one more appropriate for conditions in resource-poor settings. Called syndromic management, it offers immediate diagnosis and treatment without requiring expensive and time-consuming lab tests or advanced medical skills on the part of the practitioner. Combined with patient risk assessment, it may prove to be the most effective way to diagnose and treat STD infection in resource-poor settings.

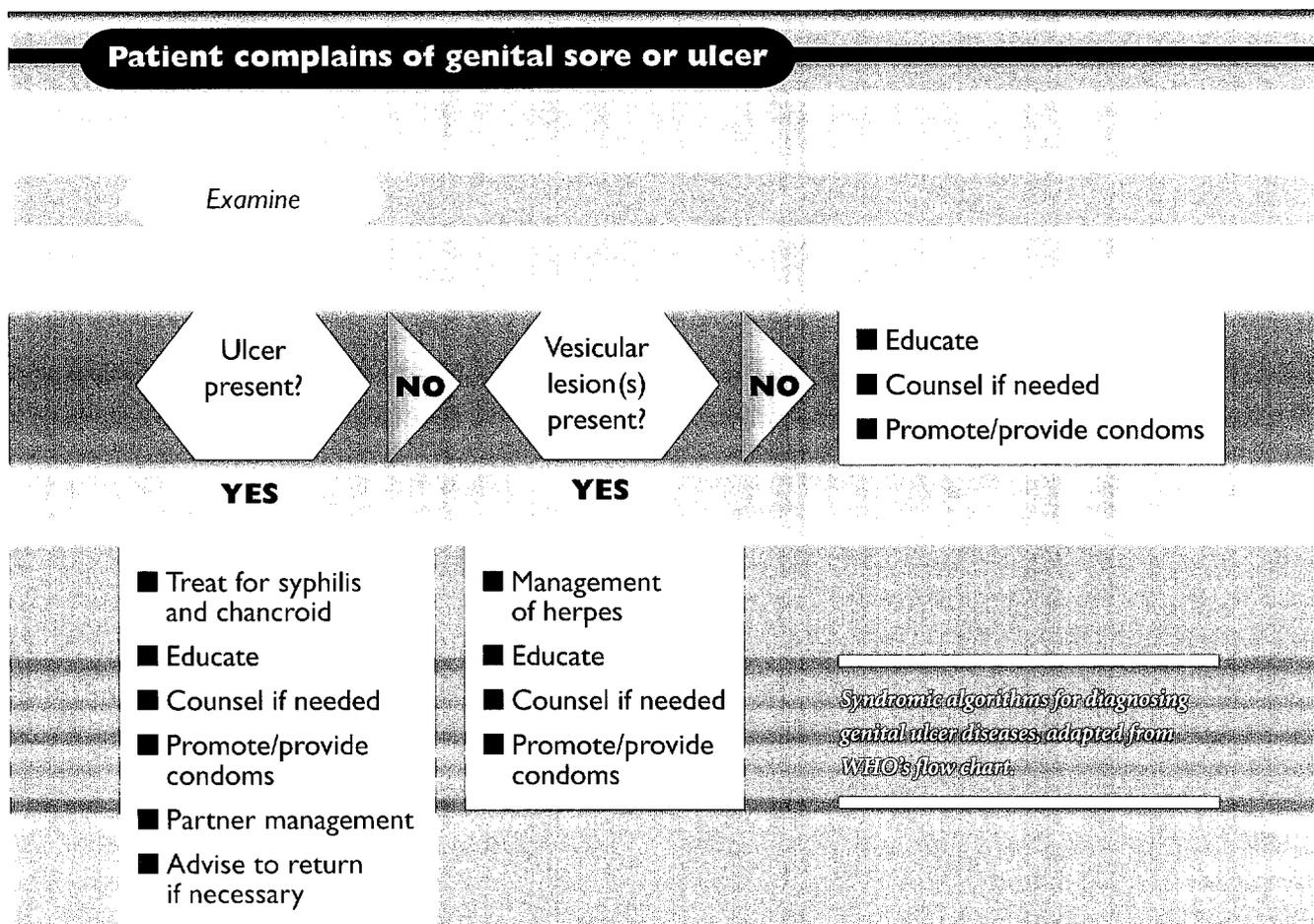
Diagnosing Syndromes

In syndromic management, the clinician bases diagnosis and treatment not on specific diseases identified through testing but rather on syndromes, which are groups of clinical findings and patient symptoms. Treatment is then offered for all diseases that could cause that syndrome. For example, a patient presenting with urethral discharge is treated for all diseases prevalent in the region that could cause such discharge—usually gonorrhea and chlamydial infection. Since all possible treatments are offered, the likelihood of a cure for the STD causing the discharge is greatly enhanced.

What helps the provider make the diagnosis and choose the correct treatment are simple flow charts that clearly map out the steps needed to

determine symptoms and treatment (see example). Developed initially by WHO, the algorithms—specific diagnostic pathways—displayed on the flow charts ideally reflect STD prevalence and drug availability in the immediate region. These flow charts may be displayed as posters on the wall of an examination room or on cards or in small pamphlets for easy reference by the provider.

Following the flow chart for genital ulcers helps explain how the algorithms work. When a patient complains of a “genital sore,” the provider consults the flow chart for genital ulcers—a syndrome usually caused by syphilis, chancroid or herpes. Since an examination alone is not a reliable way to differentiate the cause of such “sores,” the algorithm on the flow chart helps providers decide whether to treat pre-



sumptively for syphilis and chancroid or simply help patients relieve their discomfort.

The first step is to examine the external genitals in men and the outer and inner surfaces of the labia in women. If the "sore" is in fact an ulcer (a discolored break in the skin or mucous membrane with a central depression), the provider is advised to treat for both syphilis and chancroid. The chart also reminds providers to educate patients about the treatment and how to prevent further transmission, including condom use and referring partners for treatment, and to explain how patients will know whether a follow-up visit is necessary. If the provider instead observes small, fluid-filled (vesicular) lesions, the next step is to treat to relieve the symptoms of herpes, provide education and

counseling about the disease and its prevention, and encourage the patient to use condoms.

Syndromic management flow charts are designed to follow a diagnostic logic close to the provider's own thought processes. "This is, in fact, the approach that many doctors follow naturally and subconsciously," said Dr. Johannes van Dam of the joint United Nations Programme on AIDS (UNAIDS). "It simply provides a rational basis for a diagnosis or for a therapeutic decision by offering correct information based on the latest possible data."

One of the most frequently mentioned benefits of syndromic management is the lessening of provider dependence on laboratory tests. In resource-limited settings, lab testing may be too expensive to order con-

sistently, or may be unavailable altogether. Even where there are labs, they may take weeks to provide results, which may not in fact be reliable. Adopting syndromic diagnosis allows managers to reallocate precious clinic funds once diverted to testing for other critical needs, such as drugs for STD treatment.

A second advantage of using syndromic algorithms is that they greatly simplify a complex diagnostic process for health workers without advanced medical skills or experience. In developing countries with few doctors and nurses per capita, this significantly expands the pool of providers and range of facilities that can treat STDs, and thus can lower STD prevalence on a much wider scale, at a much faster rate. Even for more highly skilled health providers, who may other-



A customer buys condoms in a small shop in Vietnam.

As part of syndromic treatment, patients receive individual, on-the-spot counseling about STD prevention, including advice about condom use.

Richard Lord

wise be forced to depend on clinical diagnosis or unreliable laboratories, using algorithms can raise the likelihood of effective treatment and complete cure.

Perhaps the most important benefit of syndromic management is that treatment begins immediately. In etiologic diagnosis, clinicians usually wait for lab results to begin treatment. At the heart of syndromic management is recognition of the need to diagnose and treat an STD at the first point of contact with patients, who may live far away from the clinic and are often too poor, too busy or too intimidated to return for test results and medication.

"Patients like the idea of being treated at first visit, and because syndromic management is more efficient, the waiting time for clinic visits is much shorter," said Dr. Alfred Brathwaite of the Jamaican Ministry of Health, which has implemented syndromic management in many of the country's STD clinics.

Immediate treatment also dramatically increases the odds of a successful cure and reduces the length of time during which the infection can be spread. And because prevention education is an important part of syndromic treatment, patients receive on-the-spot counseling for behavior change, including advice on condom use and other important prevention recommendations.

The Challenges

To be effective, syndromic algorithms must incorporate local data on STD prevalence, antibiotic resistance and drug availability. STDs that are very rare in a certain region, for example, might be dropped from the boilerplate WHO algorithm model, and specific antibiotics to which a significant portion of the STD organisms in the region have developed resistance might be replaced by more effective ones. Where certain drugs are not avail-

At the heart of syndromic management is recognition of the need to diagnose and treat an STD at the first point of patient contact.

able or affordable—a problem throughout the developing world—the best possible alternatives are included on the flow chart.

Algorithms may also need modification as health systems develop new treatment strategies, as happened recently in Jamaica.

"Findings from a study on vaginal discharge prompted the Ministry of Health to adopt speculum examination for all female STD patients," said Dr. Brathwaite. "We then altered the algorithms, adding clinical evidence of infection of the cervix."

Clearly, algorithm development is hard work, requiring serious commitment and input from all key players in national health care networks: ministries of health, the private medical establishment, non-governmental organizations and public clinic systems. The data needed to determine prevalence and medication needs are often not available and can take much time and considerable research funds to generate. Perhaps the most difficult task is building agreement among all sectors of the health community on which algorithms to adopt for national and local STD guidelines—often a contentious political as well as medical task.

"The process can be tough, but it's definitely worth it," said Dr. Ward Cates of Family Health Interna-

tional. "Ultimately, what is accomplished is that the whole community comes to understand the value of recognizing and treating symptoms of STD—and that's essential to making syndromic management work."

Another challenge to adoption of syndromic management guidelines often comes from the medical establishment itself. Medical schools invariably train their students in etiologic and clinical diagnosis, and their graduates may resist a methodology they perceive as either inferior to what they've been taught or a diminution of their control.

"Physician resistance can come from different sources," said Dr. François Crabbé of the Institute of Tropical Medicine, which works with the AIDS Control and Prevention (AIDSCAP) Project in developing syndromic management efforts. "Ordering lab tests is often a matter of prestige to physicians, and in many countries, the medical establishment simply won't give up the belief that lab tests are necessary for good medicine."

The diagnostic challenges to syndromic management are even more significant. Built into the structure of syndromic diagnosis is the presence of patient symptoms—yet many suffering from STDs can be completely asymptomatic, particularly women. In fact, it's estimated that up to 30 percent of women infected with gonorrhea are symptomless; for chlamydial infection, the percentage soars to 70 percent of women (and 30 percent of men). These patients are not helped by syndromic diagnosis—unless their symptomatic sex partners notify them after being diagnosed with an STD.

One way to increase the efficacy of syndromic diagnosis in treatment of asymptomatic patients is to train providers of other health services for women to recognize clinical evidence of STDs where there are no symptoms. For example, providers

at family planning clinics, whose main objective is not STD diagnosis, may discover indications of otherwise undetectable STDs while doing speculum examinations on women clients. Such providers can be trained to begin syndromic diagnosis when they find such signs.

Even where algorithms are not very specific, they can help narrow down options for STD treatment. "Algorithms that are not specific enough to guide treatment in women may nonetheless help guide more cost-efficient use of single diagnostic tests where testing is possible," said Dr. King Holmes of the Center for AIDS and STDs at the University of Washington.

Another tool that can increase the effectiveness of syndromic diagnosis is risk assessment, which is particularly helpful in determining whether a woman with vaginal discharge should be treated for cervical infection (cervicitis) as well as vaginal infection. By asking a woman who has vaginal discharge focused questions about age, marital status, partner behavior, number of partners and frequency of partner change, a practitioner may be able to determine whether she is likely to have cervicitis, which can lead to serious health complications. Studies in several countries have identified being single, younger than 21, and involved with more than one partner or with a new partner for less than three months as risk factors for cervicitis.

To increase the diagnostic value of risk assessment, local research is necessary to identify which risk factors are effective in predicting which infections. The questions asked of patients must also be culturally sensitive, community-specific and grounded in epidemiological reality.

"Risk factors that are useful in managing patients with severe STD symptoms in primary care clinics serving indigent patients in a large port city may not be useful in a ru-

Building agreement on which algorithms to adopt for STD diagnosis guidelines is often contentious, a political as well as a medical task.

ral family planning clinic serving married women with mild symptoms," said Dr. Holmes.

Another challenge for the syndromic approach is reducing the effects of overtreatment. Because providers are directed to treat for all possible STD causes of certain symptoms, patients may receive antibiotics and other medications they do not need. The expense and inconvenience to patients of these unnecessary antibiotics can be considerable, but not unreasonable compared to the common alternative in poor communities: self-medication with ineffective drugs.

An Ongoing Effort

The AIDSCAP Project and the organizations with which it works in STD prevention are involved in syndromic management projects in more than 22 countries. Among AIDSCAP's activities in these countries are baseline assessments of prevalence and antibiotic susceptibility needed to create appropriate algorithms, field testing of diagnostic pathways, convening of health providers and leaders from the public and private sectors to build consensus on STD management guidelines, ethnographic assessments of STD health-seeking behaviors, and development of training modules and training of health care providers and national and regional pub-

lic health officials. AIDSCAP also works closely with such international bodies as WHO and UNAIDS, as well as with nongovernmental organizations and local health networks, to contribute to the worldwide effort to gather, analyze and disseminate data on STDs.

Each of these endeavors can generate immediate and ongoing benefits. For example, one AIDSCAP evaluation in Jamaica confirmed the diagnostic validity of flow charts for vaginal discharge in women and the efficacy of risk assessment in women for diagnosing STDs. The conclusions were shared with providers in the clinic where the evaluation was performed as well as with health policy makers throughout the country. The result has been the creation of new national protocols for all public health clinics in Jamaica that focus more accurately on diagnosing and treating the most prevalent STDs, reduce clinic waiting times by more than half, and save money and resources by eliminating unnecessary tests and procedures.

In the face of HIV/AIDS, AIDSCAP and other international health organizations continue to expand the search for more effective and affordable methods of preventing STD transmission, especially in developing countries. With undeniable evidence that preventing STDs also means preventing HIV, these efforts will remain at the forefront of the international campaign to control the AIDS epidemic. ■

1. In a study of 100 men and 100 women with genital ulcers, South African practitioners using clinical diagnosis correctly identified only 42 percent of chancroid cases, 32 percent of syphilis cases, and 8 percent of mixed infections in the men (rates of correct diagnosis were higher for women). See O'Farrell et al. Genital ulcer disease: Accuracy of clinical diagnosis and strategies to improve control in Durban, South Africa. *Genitourinary Medicine* 70:7-11. 1994.

An STD prevention poster
attracts a crowd in Mwanza, Tanzania.



Andy Hutchinson/EU

Study Confirms Value of STD Treatment in Curbing HIV Transmission

by David Mabey

Fifteen years into the AIDS epidemic, only one randomized controlled trial of an intervention to reduce HIV transmission had been published: a study showing that the expensive antiviral drug zidovudine reduces the rate of virus transmission from mother to child. Good news though it is, this result is of little relevance to the developing world.

A study from the Mwanza Region of Tanzania, published in *The Lancet* in August 1995, has at last offered hope to everyone struggling to slow the spread of HIV/AIDS in developing countries. A team of investigators from the London School of Hygiene and Tropical Medicine, the Tanzania National Institute for Medical Research and the African Medical and Research Foundation (AMREF) worked together with the Tanzania Ministry of Health to see whether improved treatment of other sexually transmitted diseases (STDs), given at rural health centers and dispensaries, could reduce the

incidence of new HIV infections.

Our hypothesis was that diseases such as syphilis and chancroid, which damage the skin and cause ulcers in the genital regions, and gonorrhea and chlamydial infection, which cause inflammation of the genital tract, were likely to increase the rate of transmission of HIV through heterosexual contact and that treating these diseases would reduce HIV transmission.

At the beginning of the study, medical assistants and nurses in six rural health centers were trained in syndromic management of STDs. This approach does not require laboratory facilities but depends on giving treatment for all the likely causes of syndromes, such as genital ulcers or discharges, the first time a patient is seen. During one week of classroom training and two weeks of practical training, health center staff were also encouraged to counsel their patients, offer them condoms and ask them to refer sexual partners for treatment.

Through a delivery system established for the study, the six health centers received the least expensive effective drugs for treating the major STD syndromes. For example, trimethoprim-sulfamethoxazole was the first drug of choice, along with penicillin, for treating genital ulcer disease. Health workers trained as supervisors visited each health center every eight weeks to monitor drug supplies and patient records, provide refresher training, and ensure adherence to the syndromic management guidelines.

A cohort of 1,000 adults in the communities served by the six health centers was interviewed and tested for HIV at the beginning of the study and two years after the intervention was introduced. The number of new cases of HIV infection occurring in this cohort was compared with that in another cohort selected from communities served by health centers where improved STD treatment had not been instituted. Pairs of study and com-

parison communities were matched based on STD attendance at the clinics and on location. An earlier survey had shown that HIV prevalence was higher along the main roads and the shores of Lake Victoria than in the more remote villages.

During the two years, 11,632 cases of STDs were treated at the six intervention health centers. About half of them were in women.

Overall, this simple intervention reduced the number of new HIV infections occurring over the two years of the study by 42 percent. This result was highly significant statistically. Fewer new infections occurred in the intervention community in each of the six pairs of communities (Figure 1). HIV incidence was reduced in both sexes and in all age groups, but particularly in those usually found to have the highest incidence in Africa—women aged 15 to 24 (Figure 2).

Results of a survey of study and comparison cohort members before and after the intervention suggest that these reductions in HIV incidence were the result of improved STD treatment rather than changes

in sexual behavior. The survey found little change in reported sexual behavior during the two years and no differences between the study and comparison communities.

For the first time, a randomized controlled study among the general population has shown that it is possible to slow the spread of HIV in Africa, and at an affordable cost. Preliminary “back-of-the-envelope” calculations suggest that the cost was approximately U.S.\$300 per HIV infection averted, or \$13 to \$20 per healthy life year saved, which compares favorably with the cost of other health interventions such as childhood immunization. Moreover, since the cheapest effective drugs were used and treatment was given through existing health facilities, it should be possible to introduce and sustain such an intervention in any developing country with a functioning health service.

This is not to say that health education and condom promotion should be forgotten, nor to deny that the social and economic determinants of the HIV epidemic (such as poverty, migrant labor, urbanization

and gender inequality) should be addressed. But in the short to medium term, the results of the study should provide a message of hope for those dedicated to controlling this devastating epidemic. ■

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David Mabey, FRCP, a professor of communicable diseases at the London School of Hygiene and Tropical Medicine, was one of the investigators who conducted the study in Mwanza.

Figure 1.
Rates of new HIV infections over two years in six paired communities

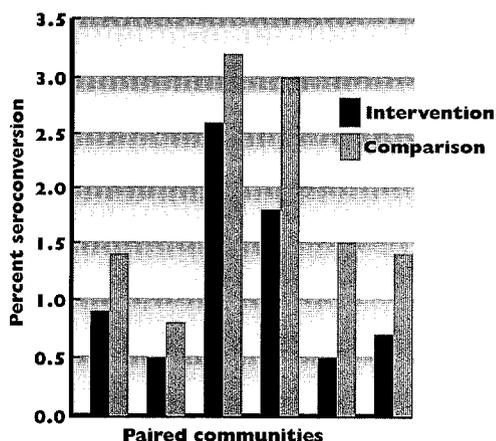
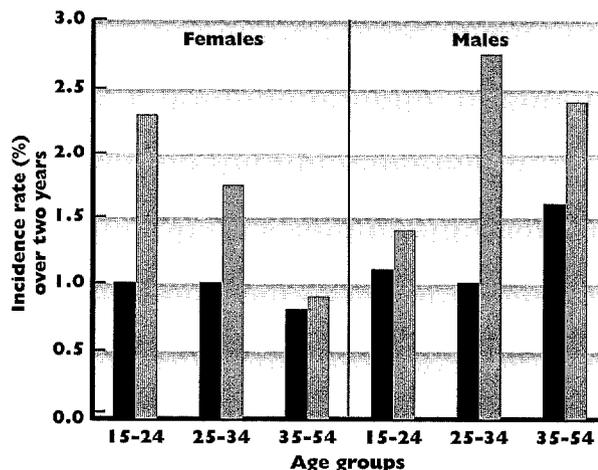


Figure 2.
Rates of new HIV infections by sex, age and intervention status



Listening to Patients: Targeted Intervention Research to Improve STD Programs

by Mary Lyn Field

In South Africa, men drink an herbal beverage before having sex because they believe it protects them from any attack of evil, including sexually transmitted disease.

In Malawi, different stages of the same STD, such as genital ulcers and ruptured buboes, are often considered separate illnesses with different names and treatments.

In Senegal, when people experience the symptoms of siti (the local name for the symptoms of several STDs), they go directly to the pharmacist. "At the health center there's a long line and no confidentiality," one person explained.

Patients' beliefs about the causes of illness and their perceptions of the services available to treat them exert a powerful influence over where and when—or even whether—they seek care. Differences between standard medical terms for symptoms and patients' own terminology can cause serious misunderstandings. And in many countries, self-treatment is common because it is inexpensive and convenient or because people feel uncomfortable going to the local clinic, particularly when the illness is an STD.

Since prompt, effective treatment of an infection is the best way to prevent further transmission, studying local perceptions, terminology,

practices and beliefs about illnesses is no academic exercise. But designing ethnographic studies so the results can be used to improve health programs is a difficult challenge.

A rapid ethnographic methodology called targeted intervention research (TIR) bridges the gap between research and practice. Developed by the AIDS Control and Prevention (AIDSCAP) Project in collaboration with researchers from Johns Hopkins University and the University of Washington, the TIR is designed to identify perceptions and beliefs that serve as barriers to STD treatment and prevention.

AIDSCAP has sponsored TIR studies to improve STD services in

six countries (two in collaboration with UNICEF) and plans a seventh study with UNICEF (see page 19). In Zambia, TIR results are being used to develop a communication plan to encourage early antenatal clinic attendance. In Swaziland the TIR will target adolescents and explore broader reproductive health issues, including family planning.

What Is TIR?

Modeled after the World Health Organization's Acute Respiratory Illness Focused Ethnographic Survey, the TIR is designed so that STD program managers can conduct their own studies with the help of a multidisciplinary technical advisory group of local experts in STD services, communication and social science research. A manual produced by AIDSCAP gives STD managers step-by-step guidelines to organizing a TIR study.

The TIR manual covers a range of programmatic issues, from patient-provider communication to perceptions about the quality of service delivery (see page 19). The first part of the manual explains how to conduct a TIR and how to analyze and apply study results. The second part of the manual consists of 10 research guides with instructions and questions for interviewers.

A typical TIR study involves interviews with people living in communities served by an STD program and with STD patients at at least one clinic. The semi-structured inter-

view guides in the manual ensure that each informant is asked the same questions, but also encourage interviewers to probe for more information and to ask respondents to elaborate on other topics that arise during interviews.

Four of the interview guides help researchers use a technique called free listing to learn more about community perceptions about diseases. Interviewers begin by asking people to list the most common illnesses that affect adults in their community, then ask them to list the symptoms of each illness mentioned. The guides become increasingly specific as the interviews progress, asking for lists of illnesses that affect the "nether area" between the waist and thighs, then asking about illnesses transmitted through sexual intercourse, and finally asking informants to associate illnesses with specific symptoms. Researchers can use details such as the order in which illnesses are mentioned to learn about their significance and the experience of community members with the illnesses.

Analysis of TIR data begins during fieldwork so that the illnesses most frequently mentioned during the first interviews can be investigated in greater detail in subsequent interviews with community members. During the first interviews, interviewers also identify people who would be willing to discuss their personal experiences with an STD in greater detail.

Because the TIR is designed to answer specific programmatic questions, it can be done more efficiently than a more traditional ethnographic inquiry. Researchers can

design, conduct and analyze a TIR study in three to six months.

Senegal

In Senegal, 253 interviews were conducted in four regions (16 sites). Causes of STDs cited included God, eating certain kinds of fish, and an intense desire for or lack of satisfaction with sexual contact.

Informants in Senegal reported

Perceptions about lack of confidentiality also influence where people seek care when they choose to attend a clinic. In many places, finding a provider who does not have some connection with relatives or friends is difficult. Fearing that information about their infection might be disclosed, many bypass the local clinic and seek treatment far from home.

Ethiopia

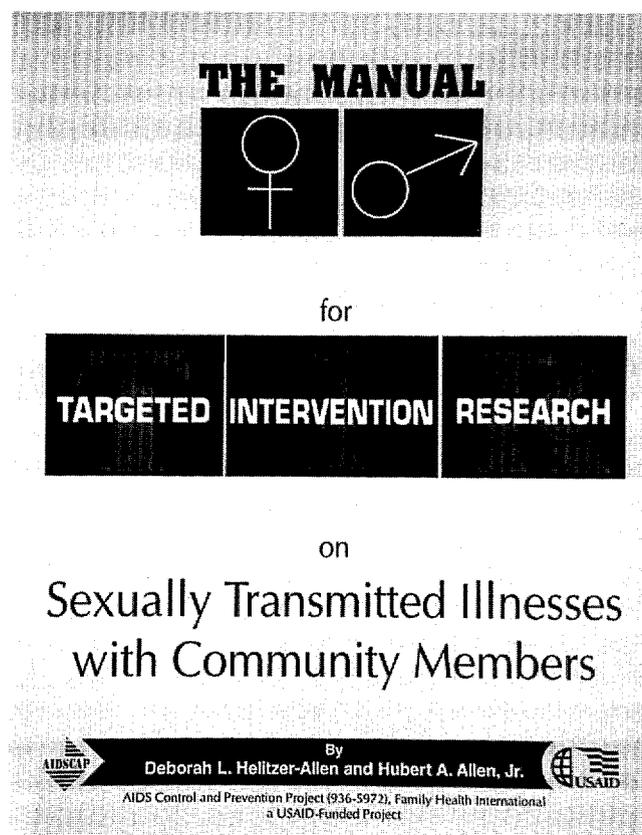
In Ethiopia, where TIR data were collected from four research sites, most people interviewed were able to name three or four STDs and some associated symptoms. The majority of respondents reported waiting ten days to one month before seeking treatment for their STD symptoms at a clinic. By the time most went to a clinic, they had already consulted a traditional healer or pharmacist.

Reasons for not seeking care at STD clinics include fear of stigma, especially in clinics with an "STD room" or in freestanding STD clinics; cost (even though treatment is provided free of charge at clinics); lack of privacy; and shortages of medicine. The most frequently cited barrier to use of clinic services is health

providers' attitudes toward patients. Community members complain that health providers are often condescending and judgmental. "Health providers should not scold," one informant said.

Zambia

The TIR is being used in Zambia to develop a communication strategy for increasing early attendance (before 16 weeks gestation) at antenatal



AIDSCAP's manual on targeted intervention research gives STD managers step-by-step guidelines to organizing a TIR study.

that they respond to STD symptoms by treating themselves with drugs they have at home or buy from street vendors, followed by a visit to a pharmacy or traditional healer. People often seek treatment from retired health workers or from health workers at their homes after clinic hours because they believe it is impossible to have a private conversation with a provider at the clinic.

clinics by pregnant women in Lusaka as part of a maternal syphilis prevention project. Early detection of syphilis in pregnant women is essential because untreated maternal syphilis can lead to spontaneous abortion, stillbirth, prematurity and congenital syphilis.

A total of 85 people were interviewed, and 54 participated in six focus group discussions. Potential motivating factors for clinic attendance were high knowledge and awareness of STDs, particularly syphilis and HIV. The women's responses suggest that they have a great deal of experience with STDs. This finding is supported by the fact that between April 1994 and March 1995, 17.5 percent of 42,366 new antenatal clients screened for syphilis tested positive.

The research also identified taboos that interfere with early

antenatal clinic attendance. One informant said that pregnant women should go to the antenatal clinic "when the pregnancy is showing, because if you go early, the pregnancy is only a ball of blood." Because of taboos, she explained, women think that their pregnancies may be stolen from them if they seek care earlier.

The Philippines

A TIR study in metropolitan Manila and Cebu involved interviews with 858 people, including registered and unregistered female sex workers and their managers, owners and managers of establishments where sex is sold, and health care workers. The study found that the STDs of most concern are gonorrhea and HIV/AIDS. Sex workers, for whom gonorrhea seems to be a catchall term for a number of sexually transmit-

ted infections, named it as the cause of seven of eight symptoms mentioned by interviewers.

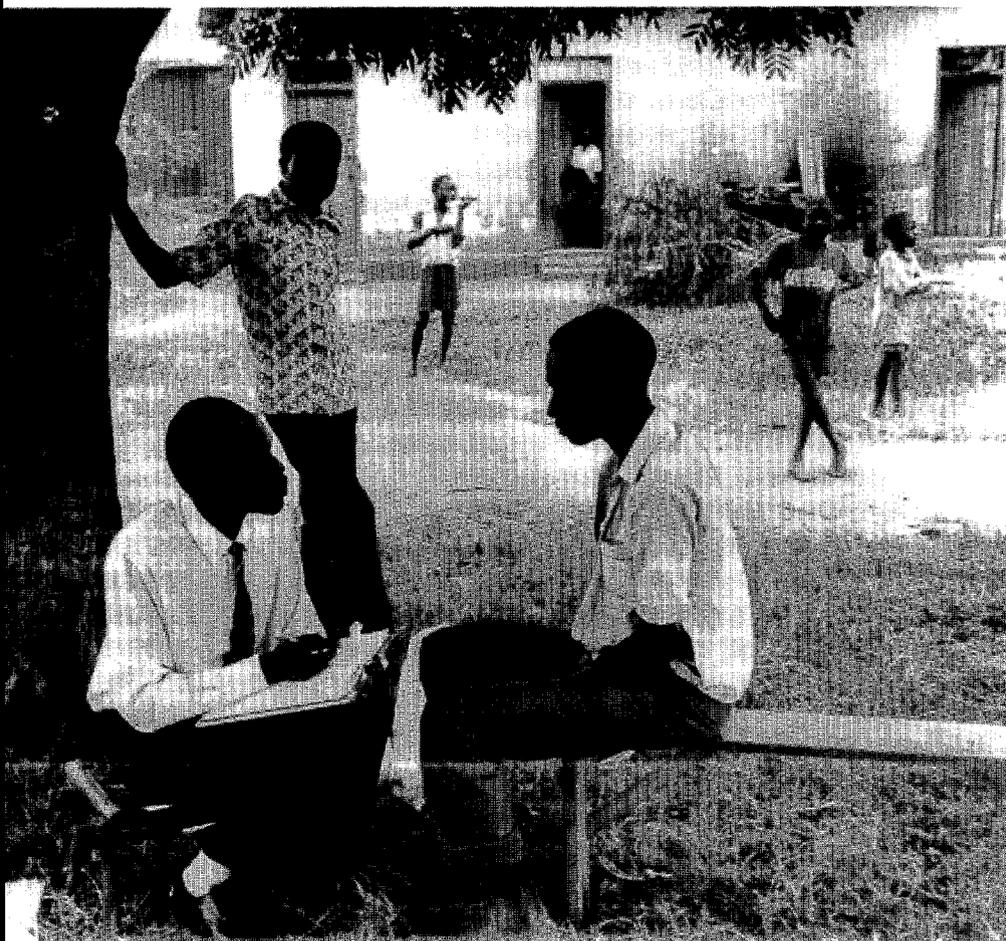
Many respondents reported prophylactic use of antibiotics to prevent STDs. A few of the women also reported drinking cold water and avoiding salty, fishy and sour foods.

Most of the sex workers seek STD care at a public health clinic. Inadequate waiting rooms and lack of privacy and confidentiality were frequently reported obstacles to clinic use. Some respondents reported treating their own STD symptoms, usually discontinuing medication after the symptoms disappeared.

Improving Programs

The next challenge will be ensuring that the TIR results are used to improve STD services and educational campaigns. STD case management training can include discussions about local terminology for illnesses to help patients and providers understand each other better. Program managers can use findings about patients' perceptions of STD services to restructure the way services are provided, train staff to address patients' concerns, and improve educational materials and outreach messages.

Many of the studies found that a real or perceived lack of confidentiality discouraged people from seeking STD treatment at clinics. If lack of privacy is the source of this problem, a clinic manager can resolve it by relocating the place where providers interview patients or, if no other space is available, by adding a screen or curtain. If the breach of confidentiality is due to providers' lack of awareness or professional-



Understanding community members' perceptions about STDs and STD services helps program managers design more effective programs.

ism, these problems can be addressed in training and clinic rules and as part of employee evaluations.

Misinformation about the causes of STDs and the taboos that discourage people from seeking care will be more difficult to overcome and may require further research. The Zambian women who think that early antenatal clinic attendance can be harmful need reassurance about what actually happens during a clinic visit. To counter deeply ingrained cultural beliefs, however, outreach workers and those who design communication campaigns to encourage clinic attendance may need more information about such beliefs.

In Ethiopia (see page 20) and Zambia, TIR results are already being used to improve communication between patients and providers. For example, an STD project implemented by the Morehouse School of Medicine in Zambia is teaching health care workers to use descriptions of symptoms rather than the names of diseases when they talk to community members and community outreach workers

As the results of other TIR studies become available, AIDSCAP staff will work with STD program managers to encourage them to apply the findings in the design of services and communication programs. Because program managers helped identify the questions they wanted the studies to answer, the prospects for direct application of the findings are good. If the results foster improved communication between client and service provider and more culturally appropriate clinic services, STD program managers will have gained an important new tool in fighting the spread of STDs. ■

Mary Lyn Field, MSN, FNP, is AIDSCAP's senior program officer for the Sexually Transmitted Diseases Unit and UNICEF technical support.

Questions Addressed by the TIR

General Information:	community names for illnesses, community understanding of transmission and prevention, sources of health care for STDs
Illness Management:	recognition of disease, determinants of health-seeking behavior
Service Delivery:	perception of health services, recommendations for improvement of services
Gender:	perceptions about differences between men and women in terms of diseases, clinic access, stigma
Partner Notification:	perceptions of vulnerability of partners and referring partners for treatment
Post-treatment:	issues of abstinence, prescription use, condom use, sexual behavior change
Communication:	sources of trusted STD information, skills necessary to improve patient-provider communication
Prevention Program:	community's current activities to prevent STDs, attitudes about and use of condoms

AIDSCAP-Sponsored TIR Research

Country	Target Groups
<i>Senegal</i>	numerous groups, including those targeted by AIDS campaigns
<i>Ethiopia</i>	community members
<i>Philippines</i>	sex workers
<i>South Africa</i>	miners and sex workers
In collaboration with UNICEF:	
<i>Benin</i>	young adults and other community members, military personnel and religious authorities
<i>Swaziland</i>	youth
<i>Zambia</i>	pregnant women and providers

The information in this article is based on reports and personal communications with Cheikh Ibrahima Niang of the University of Dakar, Senegal; Annette Ghee, an AIDSCAP consultant formerly with the University of Washington, Seattle; Ayalew Gabre and Woldeab Teshome of the Ethiopian Ministry of Health; Mark Lurie, AIDSCAP consultant; and Deborah Helitzer-Allen and Hubert A. Allen, Jr., co-authors of *The Manual for Targeted Intervention Research on Sexually Transmitted Illnesses with Community Members*.

Using TIR Results in Ethiopia

Targeted intervention
research bridges the gap
between research and
practice

When 21 health care professionals from four regions of Ethiopia gathered in Addis Ababa for a six-day workshop on materials development, they were ready to get right down to business. Divided into regional teams, they were expected to create STD prevention materials suitable for the language and culture of each region.

Team members were dismayed to learn that they would not immediately deal with the nuts and bolts of developing brochures and posters. They were eager to put pen to paper, learn about formatting and printing, and get on with the job. When queried about what messages they would use, many looked a bit exasperated. They patiently explained to the facilitator that they would tell people about the dangers of STDs, describe the symptoms, and urge people to seek professional medical care. Yes, they admitted, these messages have been used before—but the people are not yet listening, so we should tell them again.

At this point, message decisions were put on hold for what seemed to be a diversion. Researchers Ayalew Gabre and Woldeab Teshome had been in-

vited to present and discuss their preliminary findings from the targeted intervention research (TIR) conducted in the four regions represented at the workshop. They spoke about people's perceptions of inadequate diagnostic facilities and rude health workers at government facilities; they mentioned that women disliked the lack of privacy in examination rooms; they noted that people often do not return for follow up. The participants nodded in recognition.

The researchers described findings on self-medication (asking a pharmacist for a medication based on the recommendations of a friend), stigma (STDs are a "women's illness") and ideas of causality (urinating where a chicken has urinated causes STD). They mentioned the beliefs that STDs could be avoided by washing genitals after sexual intercourse or by taking ampicillin before. They told of sex workers who disliked using a condom because it "takes a man longer to ejaculate."

The participants nodded and discussed their own experience with patients who had similar opinions. Yes, they agreed, what the researchers say is true.

As smiles began to appear around the room, the health care professionals took an enormous step toward becoming professional materials designers. Based on the information they had heard, they listed 33 topics that needed to be addressed in the STD prevention materials. These topics included the following:

■ STDs do NOT cure themselves.

■ Government clinics are now efficient, private and free.

■ Don't sell half of your drugs. Take the entire treatment.

■ Discussing sexual matters with your partner is difficult—BUT it may save your life.

STD dangers and symptoms did not make the list. Instead, the topics addressed the reasons why patients do not use health services. After hearing what their prospective patients thought about STDs and STD services, the participants had changed their minds about what their materials should say.

A brochure developed during the workshop featured a "cool" guy from the city advising his country bumpkin friend. He convinces his friend that you cannot get an STD by sitting on a hot rock—one of the beliefs revealed in the research—and urges him to seek treatment at the local clinic, where he could get a correct diagnosis and free, effective treatment.

Because of time and financial constraints, the materials developed in the workshop and pre-tested and adapted in the regions reflect only a small portion of the 33 messages the participants recognized as important. Nevertheless, future educational materials and patient contacts by these professionals are likely to reflect the wider and more targeted issues that came to their attention through the TIR.

— Donna Flanagan

Donna Flanagan, MA, MSW, is associate director of AIDSCAP's Behavior Change Communication Unit.

Young People and STDs: A Prescription for Change

by Donna Kabatesi

"I was treated for an STD, but it reappeared. Another doctor said it was pelvic inflammatory disease. Can you tell me what that means?"

"I was tested and found to be suffering from syphilis. I have had several injections since. Does this mean that there is no cure for my disease?"



Schytte/UNICEF/4909

Young people benefit when they have access to STD education and counseling that respects their integrity and autonomy.

Every week, young people from all over Uganda send or call in questions like these about sexually transmitted diseases (STDs) to my radio show, "Capital Doctor." Their voices often reveal their anxiety, and I do my best to help them deal with the complex medical and personal concerns they raise.

Youth in Uganda and throughout the world seldom have access to reliable information about STDs. In many cultures, shame, fear and denial cloud discussion of the issue,

and adults to whom young people might naturally turn—parents, teachers, school nurses, community leaders—find it difficult to speak openly about STDs. In poor countries, educational and medical resources for prevention and treatment of STDs are particularly scarce.

But even when facts and figures on STDs are available to young people, their needs are often still unmet. The questions from my listeners illustrate how young people remain confused about their diagnoses and treatment even after

they've turned to providers for help.

As I've come to realize from talking about STDs to young people over the air, at schools and in clinical settings, reaching and helping youth require more than random information and a prescription for the pharmacist to fill.

STDs and Ugandan Youth

In Uganda, STDs are a serious health problem. While reliable information is scarce, one 1991 survey done by the Ministry of Health showed that approximately 20 percent of hospi-

tal outpatient visits were attributable to STDs. About half of the hundreds of calls and letters I receive at "Capital Doctor" are about STDs, the majority of them from young people between the ages of 17 and 25.

One reason why there are so few data on national STD prevalence is that many STDs are not treated within the formal health sector. Ugandans who suspect STD infection often ask drug store proprietors, traditional healers or family and friends for advice on diagnosis and care. Young people in particular seek primary STD diagnosis and treatment recommendations from the latter. If they turn to the formal health care system at all, it may be months after they've already consulted these informal sources.

Such delays are caused at least in part by cultural values that inhibit discussion of sexuality and sexually related health problems. Young people may be too embarrassed to seek clinical treatment, fearing stigmatization. Girls in particular regard anything related to sexual behavior as taboo.

High costs for treatment also discourage some young people. Even at clinics where STD treatment is "free," unauthorized charges keep some away. A young person might spend 50,000 shillings (U.S.\$50)—the equivalent of half a term's school fees—for basic treatment at a private clinic. It's little wonder that many youth turn to self-diagnosis and self-treatment, with the help of friends or family.

What motivates most young people to finally seek professional advice and treatment is what they've learned about the dangers of leaving STDs untreated. Some of the most compelling reasons include suspicion that a symptom signals HIV infection, or fear of infertility, chronic pain or even death from the STD. Because young people frequently postpone treatment, such complications are a very real threat.

One 18-year-old girl I treated waited four months to come to the clinic, despite severe pain, for which she had self-medicated with antibiotics and painkillers. She had pelvic inflammatory disease (PID), complicated by a tubo-ovarian abscess. Because of the delay, her fallopian tubes are badly damaged; she is likely to suffer from chronic PID, and will probably never be able to conceive.

■

Many young people

receive confusing and

conflicting diagnoses

that leave them more

bewildered than when

they started.

■

Seeking Help

Unfortunately, when youth finally approach the formal STD care system, they often encounter an obstacle course. Many STD clinics are overburdened, and providers have little time to talk or counsel patients. Often, young people feel they have to endure a judgmental and alienating clinic atmosphere. Care providers, believing they can influence risk-taking behaviors, may berate young men for their sexual activities, which discourages them from using formal health care systems in the future. It's hardly surprising that an impersonal newspaper column or radio program attracts young people as an alternative source of reliable STD advice.

The frustration can deepen during and after the examination. Too

often, young people find that their questions are given short shrift, or ignored altogether. Many receive confusing and conflicting diagnoses that leave them more bewildered than when they started. The diagnostic process can sometimes be incomplete or inaccurate, as seen by a widespread tendency at STD clinics to diagnose most outbreaks of genital ulcers as syphilis. Excerpts from letters sent to the health advice column of *New Vision*, a Kampala daily, are revealing.

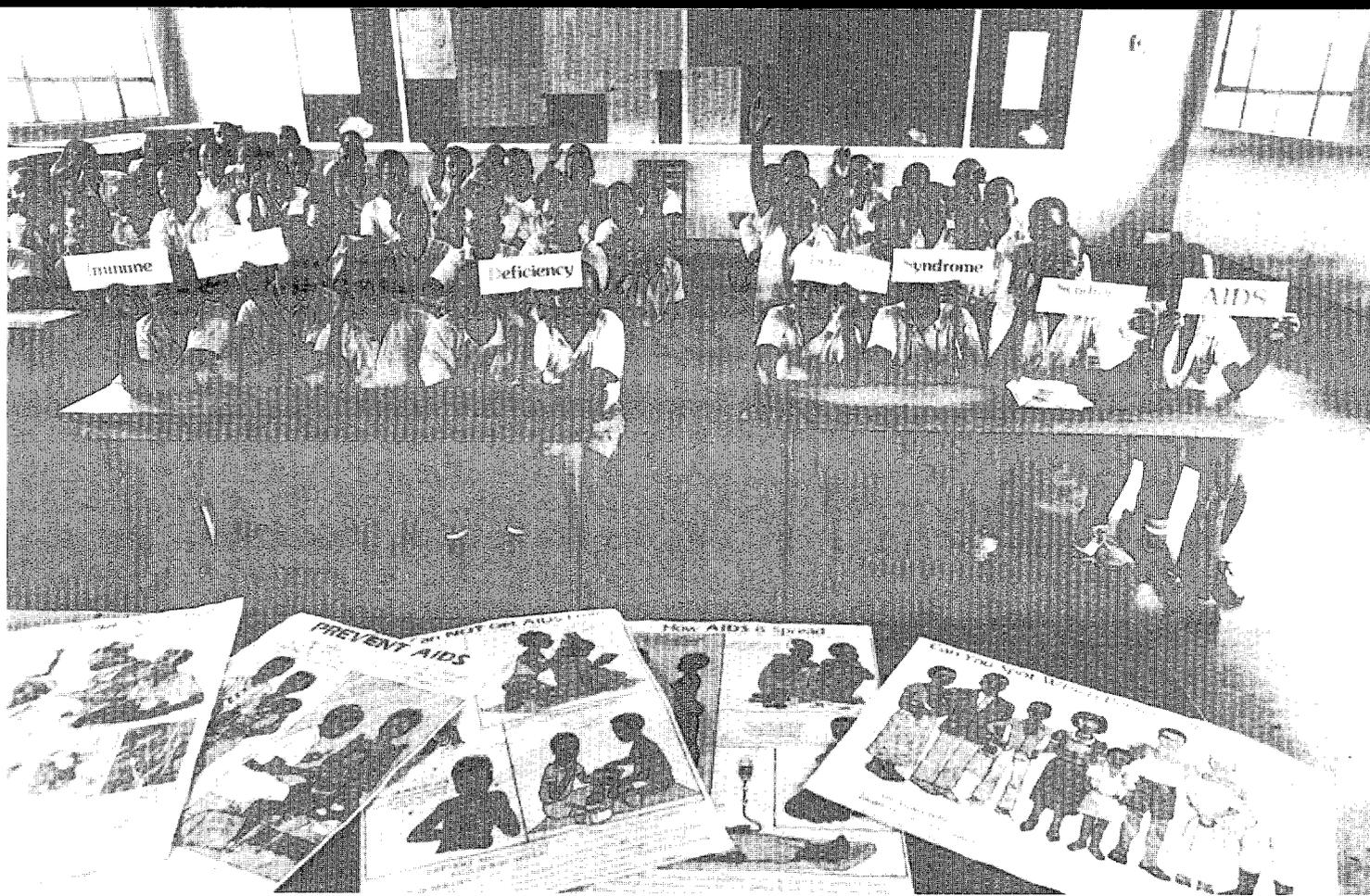
"I am 19 years old, and for six years I'd get vaginal itching and a creamy discharge. When I went to doctors, first they said it was gonorrhea, and I was treated with injections. A laboratory assistant said it was syphilis, and I was given tablets, but the cure was temporary. I also used various creams and traditional herbs, but the itching is back."

"I am suffering from a chronic STD. I have been treated with various medical injections and capsules, but I only end up with temporary relief, not a complete cure. I got the disease when I was 17 years old. Now I have many problems, pain in my testes, backache, itching. I am in a dilemma."

Creating Networks

Although radio talk programs and newspaper health columns are valuable and popular sources of STD information for young Ugandans, they cannot substitute for comprehensive, cooperative, community-based STD education and treatment networks that include the schools, mass media, the national health care system and youth organizations such as religious groups and the Scouts. Such multisectoral networks could offer both education and consistent messages reinforcing behavior change, in addition to attractive and affordable treatment options for young people.

As part of this effort, health care practitioners must be trained to pro-



In a Ugandan classroom, boys learn how to prevent becoming infected with HIV.

Schytte/UNICEF/4909

vide accurate diagnosis and treatment, as well as counseling appropriate for young people. Sensitivity and tact are particularly important when providers counsel youth. Information alone—without consideration for the confidentiality, integrity and autonomy of young people—will not lessen the anxieties that keep so many from seeking care in the first place.

Thoughtful youth educators also know that it helps to use a broad-based approach to STD education and counseling that takes other anxieties of young people into account. Most teenagers take personal appearance and social behavior very seriously and often compare themselves critically with their peers. Worrying about attractiveness and what is “normal” is all part of the package of concerns that young people have about sexuality, and youth respond well to STD educa-

tors who can also address such issues. Young callers to Capital Radio want reassurance that acne is part of growing up, that the size of their breasts isn’t unusual, that a penis that points in the “wrong” direction doesn’t imply sterility. When I’m able to answer such questions, it’s more likely that the young people who ask them will return for help if STD symptoms ever appear.

One pioneer in youth-oriented STD care is the Naguru Youth Health and Information Center in Kampala, a pilot project that provides comprehensive adolescent health services with the active participation and leadership of young people. The Family Planning Association of Uganda, the Ugandan YWCA and various religious organizations are also developing STD services for young people.

To curb the spread of STDs among young people, Uganda must

tap the full range of society’s educational, medical, social and human resources—schools and teachers, parents and employers, doctors and traditional healers, religious leaders and sports stars, radio shows and mass advertising campaigns. Individual STD education and treatment projects for youth make valiant and valuable contributions, but comprehensive national efforts are what will ultimately make the difference for young Ugandans and for millions of young people around the world. ■

Donna Kabatesi, M.D., is currently a Fogarty Scholar at the School of Public Health, University of California at Berkeley. In Uganda, she works in the STD control unit at the Ministry of Health. In addition to co-hosting “Capital Doctor,” Dr. Kabatesi is an advisor and contributor to Straight Talk, a UNICEF-funded tabloid offering Ugandan youth information about STDs and HIV.

Prevention As Policy: How Thailand Reduced STD and HIV Transmission

by Robert Hanenberg and
Wiwat Rojanapithayakorn

In 1988, government-initiated testing in Thailand revealed that HIV was spreading rapidly among intravenous drug users in Bangkok and among low-fee commercial sex workers (CSWs) in northern Chiang Mai city. These early indicators of growing seroprevalence were soon recognized by health officials as a warning that Thailand, with its large population and widespread commercial sex industry, faced an exploding HIV epidemic.

A year later, the Ministry of Public Health launched a massive expansion of its HIV/AIDS Prevention and Control Program, a comprehensive national prevention effort featuring advertising and condom distribution campaigns. But its boldest initiative was and remains the 100 Percent Condom Program, which seeks to enforce condom use in all commercial sex establishments (CSEs) nationwide—100 percent of the time.

This ambitious and innovative campaign, built upon the foundations of Thailand's 45-year-old venereal disease prevention program, is proving effective against the spread of not only HIV but other major sexually transmitted diseases (STDs) plaguing the country.

Commercial Sex and STD Control
In Thailand the main transmission route for STDs is between female



A poster encourages commercial sex workers in Thailand to protect themselves from HIV and other STDs for the sake of "someone who is waiting for you." Michael Buja/AIDSCAP

CSWs and male clients, then from male clients to their wives, and finally from wives to children through perinatal transmission. Extramarital and premarital non-commercial sex accounts for very

little STD transmission.

Although prostitution has been illegal in Thailand since 1960, the government has tried to control rather than suppress it. The brothels, restaurants and bars identifiable

to customers as CSEs are also well known to public health authorities and the police. With the chain of transmission so clearly defined, one easily located link in it between CSWs and male clients became a target for intervention by the government's Venereal Disease (VD) Units.



Sex workers at a nightclub in Bangkok.

Ron Gilling/Panos Pictures

Before the HIV epidemic, the VD Units, based in every province, served two main functions. First, they provided STD services to the general population, both male and female, and to CSWs, who were

treated and urged to stop receiving customers until they were cured. Second, they provided contact tracing of the STDs back to the sexual partner.

Contact tracing in STD treatment programs usually takes the form of partner identification and notification, but in Thailand, an additional step was taken. Whenever a man came to a government clinic with an STD, he was asked where he had contracted it, and almost always named a specific CSE. Outreach workers then went to that establishment to test the CSWs and encourage them to seek treatment at the clinics. The VD Units were thus able to develop and maintain rosters identifying every CSE in the province and the number of women working at each.

In 1989, these rosters showed 85,000 CSWs throughout the country, a figure that is roughly accurate (except for the figures for Bangkok, which are underreported). That year, the average number of CSEs within Thailand's 76 provinces aside from Bangkok and Chonburi Province was 67, and the average number of female CSWs was 681. This relatively small number of CSWs, working in a limited number of CSEs, was also a factor in making it possible for provincial VD Units to exert some control over the commercial sex industry and the spread of STDs.

Another government response to the epidemic has been to rapidly increase the number of facilities to both treat and track STDs. Before 1991, there were 85 government VD clinics. In 1991, in response to the HIV epidemic, 40 new VD/AIDS Units were created in district towns, 91 more in 1992, 101 in 1993 and 157 in 1994.

The Campaign Against HIV

After 1988 and the first detection of increasing seroprevalence rates, other indicators of transmission be-

Thailand's boldest anti-AIDS

initiative remains the 100

Percent Condom Program,

which seeks to enforce

condom use in all commercial

sex establishments nation-wide

—100 percent of the time.

gan to rise. The percentage of direct* HIV-positive CSWs rose from 4 percent in 1989 to 31 percent in 1994. From 1989 to 1993, the percentage of HIV-positive young men inducted into the army increased from half a percent to a peak of 4 percent, and the percentage of HIV-positive pregnant women in urban areas rose from 0 in 1989 to 1.8 percent in 1994.

In 1989, as soon as health authorities realized what was happening, they reoriented the HIV/AIDS Prevention and Control Program toward condom promotion in commercial sex and flooded the country with millions of condoms, enough to protect all commercial sex acts. They conducted an advertising campaign advising "promiscuous" men and women to use condoms. And in 1991 they created the 100 Percent Condom Program, which national law enforcement au-

*"Direct" CSWs are based in brothels and generally receive cash for payment. "Indirect" CSWs work in more informal settings out of a bar or at home and may receive food or other goods rather than cash for payment.

From 1989 to 1995,
the number of men
coming to government
clinics for STD treatment
declined by more than
90 percent, thanks primarily
to widespread use of condoms.

thorities back up with sanctions and tough fines for establishments that do not comply.

Many elements of the program relied on the STD prevention infrastructure already in place. Every CSW who came for a regular STD checkup to a government clinic was offered a box of 100 condoms, or as many boxes as she wanted. Every health official who visited a CSE brought along boxes of condoms.

The 100 Percent Condom Program also relied on this decades-old STD prevention infrastructure. Just as STD prevention authorities used the reports of patients to identify the CSEs that were the sources of infection, the same procedure was used to find out which establishments were not enforcing condom use. Strong pressure, sometimes from the police, was brought to bear on uncooperative brothel owners. Since the pressure was applied uniformly to all CSEs, clients could not simply go where condoms were not used. Owners and CSWs, once they understood that they would not lose business to other establishments that did not insist on condoms, were inclined to cooperate

The results were dramatic. Before the epidemic struck, surveys showed that the percentage of commercial sex acts where condoms were used was around 15 percent. This percentage began rising immediately in 1989, and by 1994 had reached more than 90 percent. From 1989 to 1995, the number of men coming to government clinics for STD treatment declined by more than 90 percent, thanks primarily to widespread use of condoms.

In 1993, the most sensitive indicator of HIV transmission in Thailand, the percentage of army conscripts testing HIV-positive at induction, started falling. Recent data have shown that the incidence of HIV transmission in commercial sex has also decreased to a very low level.¹

Perhaps the main reason for the campaign's success was its concentration on a limited objective—the consistent and widespread use of condoms in commercial sex—rather than on wider goals, such as eliminating commercial sex altogether, or the improvement of public morality.

Throughout the campaign, STD treatment played a minor role. Several hundred new STD treatment centers were set up in district hospitals, but these were used less for treatment of STDs (whose numbers were falling fast) than for prevention education, counseling of both infected and uninfected people, and condom distribution.

The Program's Future

While the first link in the chain of STD transmission between male clients and female CSWs has been interrupted, it has not been cut entirely. Condom use in commercial sex remains high, yet it is not 100 percent. Men who still do not use condoms despite widespread condom promotion campaigns must be considered a particularly high-risk group, responsible for the continu-

ing transmission of HIV to uninfected CSWs. One of the most difficult challenges for health authorities now is reaching these men.

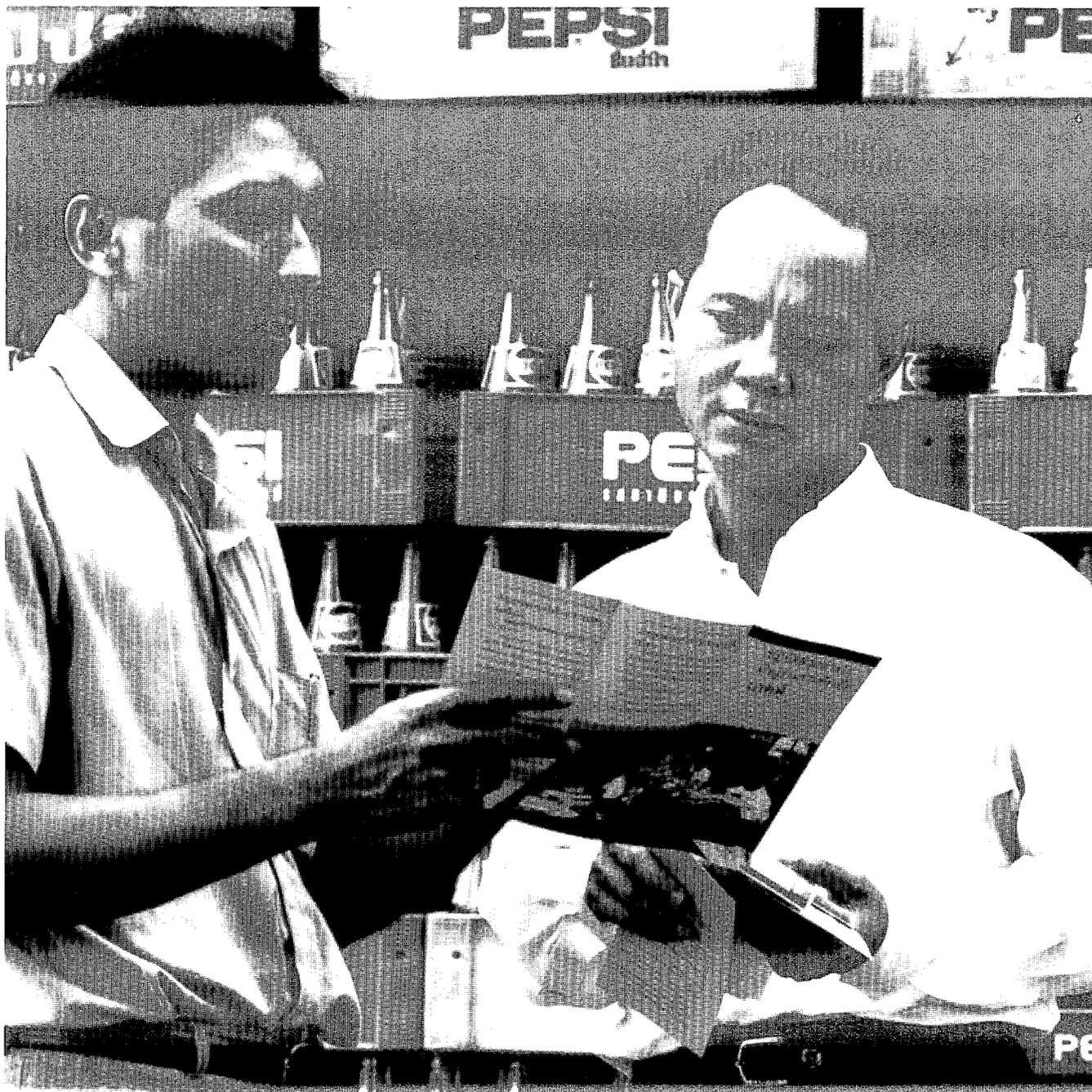
While condom use may eventually decline, many public health officials are optimistic that it has become an ingrained practice in commercial sex. Moreover, because many of those infected with HIV early in the epidemic are becoming ill, AIDS has become visible, which may motivate continued condom use.

It's also possible that the HIV epidemic, which was exacerbated by commercial sex in the first place, has altered the commercial sex industry itself. Since 1989, the number of CSWs has decreased by about 25 percent. Men patronize CSWs less, and women are less willing to engage in commercial sex, especially based in brothels. Commercial sex has shifted to the less direct forms and has become more expensive.

Lower levels of brothel patronage mean less transmission. But indirect commercial sex is more difficult to control, because indirect CSWs, who tend to have sex off premises, are less able to insist on condom use. Moreover, as the number of Thai women willing to work as CSWs decreases, women from other countries are taking their place. Women who are in Thailand illegally and who do not speak Thai well may be hard for the authorities to identify, counsel and treat.

As fewer men are infected with HIV, the infection of wives will diminish as well. But this link in the chain can sometimes be interrupted directly when, for example, a couple gets tested for HIV before marriage. The government now offers anonymous counseling and testing in most provincial and district health facilities.

Models of the epidemic show that commercial sex should remain the main target for control of HIV in Thailand, and Thai health authori-



An outreach worker discusses an AIDS prevention brochure with a personnel training officer at a Pepsi Cola factory near Bangkok. AIDS education in workplaces helps promote condom use in Thailand.

Lance Woodruff

ties continue to focus on the commercial sex industry. They are also considering distributing female condoms and lubricants, developing vaginal microbicides and providing outreach services in languages other than Thai. But, given the success of the 100 Percent Condom Program, the chief policy aims of the

Thai program will undoubtedly be to keep condom use high in commercial sex and to strive to make it truly 100 percent. ■

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Robert Hanenberg, PhD, is a research associate, Asia Region, for Family Health International in Bangkok. Wiwat Rojanapithayakorn, MD, is chief medical officer in the Department of Communicable Disease Control of the Ministry of Public Health, Bangkok.



Studies Show Partner Notification Contributes to STD Control

by Richard Steen

Discussing a sexually transmitted disease (STD) with a partner is difficult because it raises questions about fidelity, trust and blame.

Such communication is essential, however, because sexual partners of STD patients are at high risk of being infected themselves. Because many of them do not have symptoms, they do not seek medical care on their own.

As one of the few available means of reaching individuals with symptomless STDs, partner notification and treatment are important parts of an STD control strategy. In two studies sponsored by the AIDS Control and Prevention (AIDSCAP) Project, partner referral increased by 25 to 35 percent the number of individuals with a high likelihood of having an STD who actually received treatment.

Partner Referral in Haiti

In Haiti, partner referral was included in a pilot STD screening and treatment project for women attending antenatal clinics in Cité Soleil, Port-au-Prince. As part of a baseline study, information about attitudes toward partner notification was gathered in focus group discussions conducted by researchers from the Centres pour le Développement et la Santé (CDS)—the largest local nonprofit health care provider in Haiti—the Department of Medicine of the University of North Carolina at Chapel Hill, and AIDSCAP.

The discussions revealed that common STD syndromes were well known, but people had misconceptions about STD transmission. “Participants agreed that STDs can be contracted through sexual inter-

Rwandan women chat in the fields. A study in Rwanda found that women were more likely than men to refer their partners for STD treatment.

course, but felt that they could also be brought on by abrupt changes in temperature, supernatural forces or poor hygienic conditions in the slums," said Frieda Behets, one of the investigators.

Both men and women understood the need to treat sexual partners and the risk of transmitting STDs from mother to child during pregnancy or at birth. One woman described how she could unknowingly transmit an infection to her infant that would be discovered only after delivery.

But members of the group did not recognize the possibility that some people infected with STDs are asymptomatic. Some discussion participants believed that people infected with STDs would always have symptoms. Others thought that asymptomatic STDs simply did not exist.

The community as a whole was receptive to a partner referral program, but policy makers and health care workers seemed to think it was a particularly delicate issue. Several women in the focus group wanted to enroll in the program immediately.

Using the findings of the focus group discussions, CDS began a partner referral program in its antenatal clinics. Pregnant women found to have an STD were educated about STDs, treated and encouraged to refer their partners to the clinic for treatment. They were also asked to volunteer the names and addresses of partners to allow community health workers to contact those who did not come to the clinic on their own.

Of 1,001 women who enrolled in the program from April to September 1993, 418 tested positive for an STD. More than 90 percent of them agreed to inform their partners; 73 percent agreed to partner referral by a health worker and supplied the names and addresses of their partners.

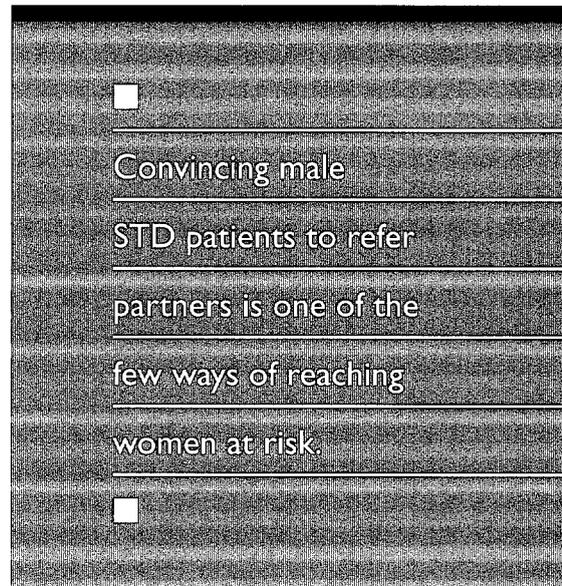
The 384 women who were treated for an STD named 331 partners. Only 30 percent (101 men) of partners of women infected with STDs went to the clinic for treatment after referral by the women. An additional 11 percent (38 men) sought treatment as a result of referrals by health workers.

As part of an effort to determine the effect of referring the male partners of the women to another clinic, half the men who presented to the antenatal clinic were treated there and half were referred elsewhere. More than half the 59 male partners who were sent to another center for treatment failed to receive care. Lack of money and time were among the reasons the men gave for not going to the second center for treatment. The researchers recommended treating partners at the same facility as the initial (index) patient and removing barriers to partner treatment, such as clinic fees.

The researchers also emphasized the importance of communication. They concluded that more STD patients could be encouraged to refer their partners for treatment through community-based educational campaigns stressing the asymptomatic nature of many STDs and the fact that many STDs are curable. They also speculated that training to improve the communication skills of community health workers who referred partners would increase referral rates.

Results in Rwanda

In Rwanda, partner referral was introduced in two primary health care facilities to assess the feasibility of making partner notification a part of upgraded national STD services. The study, conducted by researchers from the Rwandan national AIDS control program, the U.S. Centers for Disease Control and Prevention, the U.S. Agency for International Development and the AIDSCAP Project, provided all pa-



tients found to have an STD with treatment and counseling about STD transmission and condom use. Patients with STDs also were urged to use a referral coupon to encourage sexual partners to come to the clinic.

The coupons, which invited the partners to the clinic for a free STD examination, were coded to tell health care providers what treatment to give the patient based on the STD treated in the initial patient. The coupons also enabled the program manager to monitor referral trends.

Three-quarters of the 427 patients presenting with STD symptoms from September 1993 to March 1994 were women. Although 248 index patients accepted referral coupons, only 110 partners were actually treated at the clinics.

Women were more likely than men to accept partner referral coupons and to successfully refer partners. Patients who were aware of STD symptoms in their partners were twice as likely to refer them for treatment. The results of the Rwandan study also suggest that better counseling and education of index patients would increase the number of partners successfully referred for treatment.



A training session at one of the health centers run by the Centres pour le Développement et la Santé in Haiti.

Nearly all partners referred by index patients were spouses or regular partners. Patient referral was not effective in identifying casual contacts, who are usually more important in the spread of STD in a community. Future partner referral programs should incorporate additional strategies for reaching casual partners.

Gender and Partner Referral

Most attempts to evaluate partner referral strategies have reported referral rates in the range of one partner treated for every two to five index patients seen with an STD. Much of this previous work took place in STD clinics, where the majority of index patients are men. The partner referral programs in Haiti and Rwanda achieved similar referral rates, though among different populations.

Targeting male STD patients for partner referral makes sense. STDs are easier to identify in men, and their female partners are more likely to be asymptomatic. Serious complications of untreated STDs in women, such as infertility, ectopic pregnancy or congenital infection, can develop months to years after infection, often long after a partner has forgotten his initial infection. Convincing male STD patients to refer partners is one of the few ways of reaching women at risk.

Treating the partners of women with STD is important too, for many

of the same reasons. An untreated infection in a partner increases the likelihood of reinfection of the woman, contributes to the spread of STD in a community and is a potent cofactor facilitating HIV transmission.

Prenatal syphilis screening presents an opportunity to identify silent syphilis infection in mothers and prevent the severe consequences of congenital infection in newborns. Through partner referral, it is an opportunity to treat many fathers as well. Provided the quality of laboratory testing is good, there should be few false positives that would result in unnecessary partner notification and treatment.

When accurate laboratory testing is not available, however, some STDs are more difficult to diagnose in women. Current syndromic methods for identifying STDs in women with vaginal discharge, for example, are imprecise and sometimes lead to treatment of women who have non-sexually transmitted conditions. Treatment of these women, although justified by the serious consequences of untreated STD, raises concerns for care providers when they counsel partners. Without more diagnostic certainty, providers may decide not to inform a patient or her partner that the condition may be sexually transmitted, especially when such information could lead to accusations, divorce or abuse.

It might, however, be reasonable to advise partner treatment as a means of preserving fertility and promoting family health. Advising treatment of genital infections as part of responsible family planning or to help ensure a healthy pregnancy may lead to better cooperation and reduce the risk of discord between partners. This approach is a departure from traditional approaches used to counsel men but may be more appropriate than stressing the sexual transmissibility of an infection that may not, in fact, be an STD.

Health workers in Haiti found that men were more willing to come for treatment when the problem was framed in the context of preserving fertility or ensuring healthy offspring. When men who had come to the clinic were asked why it was important to them to receive treatment, one of the most common responses was "to protect the child."

The Haiti and Rwanda studies show that it is important to refine strategies for reaching sexual partners, many of which were developed for STD programs targeting men, to meet the needs of women. More work is needed to develop counseling approaches that encourage partner treatment while avoiding stigmatization and partner accusation. Better methods also are needed to convince patients of the importance of notifying partners, even when the partner has no symptoms of STD, and to reach and treat casual sexual contacts in order to break the chain of STD infection in a community. ■

Richard Steen, PA, MPH, is the STD officer in AIDSCAP's Africa Regional Office in Nairobi, Kenya. He was AIDSCAP's resident advisor in Rwanda from 1993 to 1994.



A customer in a Thai pharmacy learns how to take her prescription.

**In Thailand,
pharmacies are
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STD.**

Mobilizing Pharmacists for STD Control

by Aurorita M. Mendoza and Waranuch Chinvarasopak

- Suvit, a 20-year-old truck driver, notices swelling in his groin. He goes to a drugstore and tells the clerk his problem. Without a moment's hesitation, the clerk hands him a packet of medicine, advising him to take it for two weeks.
- Prontip, a 22-year-old housewife, has been experiencing painful urination and malodorous discharge for three days. The last time she had this problem, the local pharmacist sold her some tetracycline. Remembering how quickly the medicine relieved her symptoms, she goes to the pharmacy and buys more tetracycline.
- Sunee, an 18-year-old waitress, asks a drugstore clerk what she should take for inflammation in her genital area. The clerk recommends taking an antibiotic and using a cream for at least one week, but Sunee has only enough money to buy a three-day supply. After three days she feels better, so she does not return to buy the rest of the dosage.

These are familiar scenarios in Thailand, where pharmacies are believed to be the first recourse for two out

of three people with symptoms of sexually transmitted disease (STD). Because of the social stigma associ-

ated with STDs, many people prefer to treat themselves rather than go to a clinic or physician's office. But unless the pharmacists and drugstore staff who supply drugs for self-treatment are well-informed, the results can be persistent infections, serious health complications and increases in resistance to drugs.

Recognizing drugstore personnel's potential as partners in STD control, as well as the potential for harm if their role in STD treatment were ignored, the AIDS Control and Prevention (AIDSCAP) Project and the Program for Appropriate Technology in Health (PATH) developed a pilot project with drugstore personnel. By educating pharmacists and drugstore staff and their clients, the project aimed to improve STD management practices in Chiang Mai, a province in northern Thailand with high rates of HIV prevalence, and create a model that could be replicated in other parts of Thailand.

"Mystery Shoppers"

The pilot project began with a baseline study of drugstore services and drug-buying behavior. The study found that 256 drugstores in Chiang Mai Province sold modern medicine. Of these, 149 were licensed to sell prescription medicines because they were owned or managed by a registered pharmacist. The remaining 107 stores sold only over-the-counter medication. These stores are usually managed by a nurse or someone who has received training from the Thai Ministry of Public Health.

As part of the baseline study, "mystery shoppers" were sent to drugstores to pretend they had STD symptoms and buy drugs to treat themselves. They found that pharmacists and sales personnel seldom asked them about their symptoms, gave them minimal instructions about how to take the drugs they bought, and rarely referred them to

health facilities for diagnosis and treatment.

Results of the mystery shopper survey presented a bleak picture of STD treatment practices at the pharmacies and other drugstores. Less than half of the pharmacy personnel correctly dispensed medications for most STDs—notably syphilis, gonorrhea and chancroid. Medication for syphilis was correctly dispensed at only two out of 30 drugstores.

Small group discussions were held with drugstore staff to gain a better understanding of the problems they faced. Drugstore personnel said they often had difficulty determining the cause of a client's symptoms. They do not always have the most current information about the appropriate treatments for certain diseases or about drug resistance in their region.

During the small group discussions, facilitators solicited participants' suggestions for solutions to these problems. Proposed solutions included training drugstore personnel in STD management, disseminating educational materials to drugstore staff and customers, and holding meetings to enable pharmacists and non-pharmacist drugstore staff to exchange information, ideas and experiences.

Pilot Project

AIDSCAP and PATH worked with the province's two drugstore associations, the Pharmacist Club and the Drugstore Club, to improve drugstore personnel's knowledge of STDs. A series of workshops were organized to train pharmacists and drugstore owners and managers to recognize STD syndromes and dispense appropriate medications.

Workshops were held Sundays—the trainees' day off—for 35 to 45 trainees. Two hundred pharmacists and drugstore owners and managers attended the workshops; 100 more received information from

project staff who visited their drugstores.

"The business practice of 'give the customer what he wants' was a prevailing notion, so educating the clientele also was important," said Dr. Busabon Jamroendararasame, then project manager of the Chiang Mai Pharmacist Club.

An information campaign to encourage people to seek appropriate treatment for STDs targeted three groups of consumers: military personnel, youth (including pharmacy students) and the general public. These groups were reached through training workshops, small group discussions and a public exhibition. In addition, Chiang Mai University and the Institute for Management Education of Thailand held two seminars for leading businesswomen to encourage them to educate their employees about HIV/AIDS and other STDs.

A variety of print materials, including a pictorial pamphlet about STD treatment, a flip-calendar describing appropriate treatments for common STDs, and a handbook on STD treatment, were produced and distributed to drug sellers for their own reference and to use in educating clients. Every month the Chiang Mai Pharmacist Club distributed 500 copies of its newsletter with the latest information on STD drugs to its members and to members of the Chiang Mai Drugstore Club and other medical organizations. A periodical produced jointly by the two associations, which included information about their participation in improving STD management skills, was distributed every four months to 1,000 people.

Lessons Learned

The results of the pilot project show that given proper education, drugstore personnel can play an important role in STD control. During the 18-month project, great progress was made in improving the knowl-



After participating in the training workshops, pharmacists and clerks were more likely to explain why certain drugs were being dispensed and how they should be used.

edge of staff and their clients and helping them use that knowledge to improve STD case management.

A project evaluation that included another mystery shopper survey revealed marked improvements in the sale of appropriate drugs for some STDs. The mystery shoppers also found that drugstore personnel had become more open to questions from clients. Pharmacists and clerks were more likely to explain why certain drugs were being dispensed and how they should be used.

One of the project's strengths was its participatory approach. Pharmacists and drugstores were involved in every phase of the project, from needs assessment to activity planning and problem solving. Pharmacists and drugstore owners and managers who attended the training workshops helped organize meet-

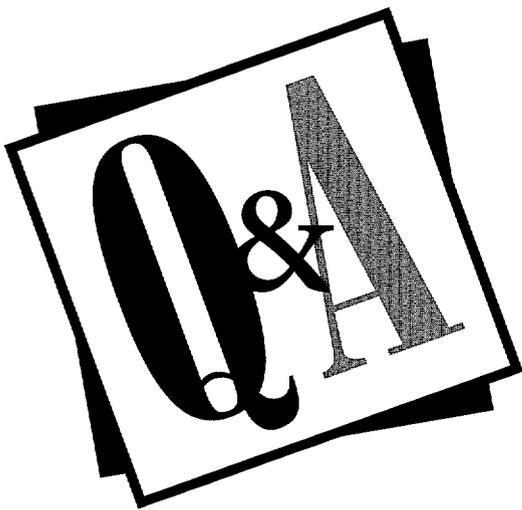
ings, produce periodicals, develop curricula and prepare technical papers. This participatory process and the opportunities for professional development that it provided were key factors in enhancing participants' commitment to improving STD management practices and promoting sustainability.

An indicator of the prospects for sustaining and building on the benefits of the pilot project was the willingness of drugstore owners to provide financial support to the Pharmacist Club so it could continue funding and producing educational materials for dissemination to drugstores. The involvement of the two organizations in this project helped them realize that they had the capacity as well as the resources to play a more positive role in the health system.

The project's collaboration with

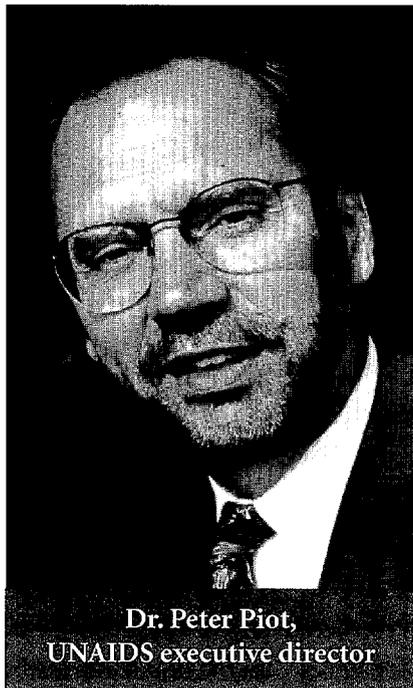
the drugstore associations laid a good foundation for further work with drugstores and pharmacies. Encouraged by the success of the pilot, the European Community is supporting a similar training program for drugstore personnel in Bangkok that will also establish referral networks between drugstores and health facilities. Most recently, an effort has begun to train drugstore personnel throughout Thailand so that they can play a greater and more constructive role in the national AIDS prevention and control program. ■

Aurorita M. Mendoza is regional representative and Waranuch Chinvarasopak is associate program officer for the Program for Appropriate Technology in Health (Bangkok), a subcontractor to the AIDSCAP Project.



New U.N. Program Promotes Multisectoral Approach to AIDS Prevention

UNAIDS



Dr. Peter Piot,
UNAIDS executive director

The new joint United Nations Programme on HIV/AIDS (UNAIDS) coordinates the HIV/AIDS activities of its six cosponsors: the United Nations Children's Fund (UNICEF), the United Nations Development Programme (UNDP), the United Nations Population Fund (UNFPA), the United Nations Educational, Scientific and Cultural Organization (UNESCO), the World Health Organization (WHO) and the World Bank. UNAIDS Executive Director Peter Piot, a physician and scientist from Belgium, discusses the challenges ahead and his goals for the program.

You've said that UNAIDS' strategic plan is based on what we've learned from more than a decade of responding to HIV/AIDS. What have we learned?

We've learned several things. One is that the dichotomy between prevention and care is not useful. We can't afford to focus entirely on prevention any longer. Another is that we must try to reduce people's vulnerability to HIV through societal action.

But I think the main lesson of the last decade is that the HIV/AIDS

epidemic is no outbreak. It's no longer a question of advising people to be careful for a few years until the epidemic is brought under control. Now we know that people will have to live with HIV risk throughout their lives and will need protection options for each stage of their lives.

On the other hand, we are not powerless against HIV. There have been successes in several countries, often where there is strong community involvement. Some communities in the developing world have managed to stabilize or reduce

transmission rates. In Australia and some northwestern European countries, this has even been achieved on a nationwide scale.

How is UNAIDS different from WHO's Global Programme on AIDS?

First of all, the new program brings together six agencies. It has become clear that this epidemic is too complex to be tackled by one single approach. In institutional terms, in the U.N. system that means that it has to be dealt with by several agencies,

in a coordinated manner.

The UNAIDS program will also be much more multisectoral in its scope, involving all sectors of society that can affect the course of the epidemic or are affected by it: the health and education sectors; ministries of trade, finance, planning and development; nongovernmental and community organizations; people living with HIV and AIDS; research institutions; and the business sector.

How will this program bring the six agencies together to make this multisectoral approach a reality?

In every country the U.N. agencies will form a "Theme Group on HIV/AIDS," with representatives, first of all, of the six agencies, but also of other U.N. agencies, sitting around a table and talking to each other. That's the most basic level of coordination: at least you know what the others are doing, which is not always the case at the moment. And that is true, frankly, not only in the U.N. system but also for bilateral donors and ministries in a country.

Second, we will encourage countries to have an AIDS strategy that incorporates the different sectors.

Does that mean you'll be helping countries revise their national AIDS plans?

Yes. We're reviewing on a country-by-country basis the needs in terms of finances, human resources and technical support and the available resources. This will happen over a two-year period.

Could you give me examples of how a plan might be different—reflecting the multisectoral approach?

Multisectoral plans already exist in several countries, actually. Let's take the example of Tanzania, whose second medium-term plan already involves numerous sectors.

In Tanzania the prime minister

and the first vice president's office oversee district-level implementation in collaboration with the Ministry of Community Development and many other ministries, with NGOs providing social support to people living with AIDS and their families, and with political parties, which have been successful in national mass mobilization. The ministries of Health, Education and Culture, Labour and Youth Development, Defense and National Service, Information and Broadcasting, and Home Affairs all play a role in HIV/AIDS prevention. Companies are involving young people in designing, planning and implementing activities to minimize rural exodus and risk behaviors among youth.

That's the level of involvement UNAIDS will try to emulate.

At the international level, how will you coordinate the HIV/AIDS work of each agency?

We're the AIDS program of the cosponsors. We won't replace their work at the country level, but at the global level, most of the AIDS-related activities of the six agencies will be subsumed under UNAIDS.

On the other hand, some AIDS-specific activities will have to go on in the different organizations—for example, WHO will have to integrate AIDS-related policies and considerations into its blood safety activities. So each organization will maintain a small capacity, which in most cases will mean two to three professional staff, to push AIDS on the agenda of the organization.

Many people have talked about the need for a multisectoral approach to HIV/AIDS. How can the U.N. make it work?

I think that a multisectoral approach will only work when the different sectors see that it is in their self-interest to do something about AIDS. So I think this is our job, to convince

them that it is really in their interest.

So UNAIDS' role is advocacy?

Advocacy is one of our four main roles. The others are research and development of policies—identifying what we call international best practice, or the most effective responses to the epidemic—and providing technical support to help countries incorporate these policies, strategies and actions into their response, as well as the coordinating role I described. As the world's advocate on AIDS, we'll advocate not only for more resources but also to keep HIV/AIDS on the agenda.

Do you think this program will give you greater leverage to find more resources for HIV/AIDS prevention and care?

Leverage, yes, but not necessarily to have the resources ourselves. My goal is to have more money spent by the cosponsors and by the countries themselves on AIDS.

The money that's available for development is shrinking worldwide, so it's a matter of better using our funds. For example, with care, you can do a lot without dramatically increasing resources—unless you start talking about antiretroviral therapy. We can improve quality of life by training personnel, by providing prophylaxis for certain infections or treating the most common health problems, and by organizing community support. One has to find solutions that are locally affordable.

Given the recent findings in Tanzania of dramatic reductions in HIV transmission as a result of improved treatment of sexually transmitted diseases, what will UNAIDS do about STDs?

We will promote effective existing approaches to diagnosing and treating STDs and stimulate more research in this area. For example,



UNAIDS
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UNAIDS is the secretariat of the STD Diagnostic Initiative, which seeks to develop affordable, simple and rapid tests for the diagnosis of the most common STDs.

UNAIDS will also assist countries in their planning for STD control. This requires addressing a number of issues, such as the availability of effective and affordable drugs, involvement of many health care providers, lack of access to information, prevention of infection and adequate services for women in the developing world.

You said we must reduce people's vulnerability to HIV. How will UNAIDS do that?

Nine out of ten people with HIV today live in a developing country and HIV incidence is growing in poor or marginalized communities in the industrial world. Every day thousands of people become infected because of societal factors, such as poverty, migration, civil disorder and the inferior status of women, that make it harder for them to protect themselves from HIV.

AIDS has become a real development issue. We know that poverty, for instance, is an underlying factor driving women into prostitution, but can we as an AIDS program, with our small budget, do something about that? The answer is yes. We can advocate for changing

laws—for example, inheritance laws should change. Breaking the silence around certain issues, that's another thing we can do. And building coalitions with human rights activists, with the women's movement.

In a speech last year you said the new program "cannot and should not become a vehicle for alleviating poverty or ending discrimination—a new way to right all wrongs." What did you mean by that?

Human rights is an example. Many groups deal with human rights, but they rarely have HIV/AIDS on their agenda. We can work with them to make sure that they address HIV/AIDS and discrimination against people living with HIV/AIDS. But we're not going to solve all the human rights violations, and it would not be appropriate to focus only on human rights violations.

We have an immediate problem. If we wait until we have a perfect situation in terms of women's status and ending poverty, tens of millions of people will have died from AIDS. We need immediate protection as well. I think one has to work on both and not lose perspective.

What are some of the other challenges facing UNAIDS?

We still have no vaccine and we won't have one ready for mass distribution before the twenty-first

century. Even if we could magically stop all transmission from that time on, it would be very hard to prevent the disastrous personal and societal repercussions from the illness and death of millions already infected.

Another challenge is that there is still a lot of denial—denial and a lack of political commitment. Many governments are hardly spending anything—not spending a cent on AIDS—even though it's one of the major obstacles to development.

What are your main goals as head of UNAIDS?

One is political commitment to this epidemic from world leaders, translated into financial support for their AIDS programs and also speaking up about AIDS, just like President Museveni is doing in Uganda, mentioning AIDS in every single speech.

Another goal is to run an efficient U.N. operation that makes optimal use of the resources we have. I think we'll be able to do that through better coordination and relying more on local people and local resources.

And third, I want to see a slowing down of the spread of the epidemic. I'm sure, at least in certain parts of the world, we can do that. We're gaining momentum. But the great danger is that the effort will be interrupted, that the donors will give up. It would be a shame to do that right now. ■

Women's Forum



Opinion

Women, Children and STDs: Addressing the Other STD Epidemic

by Penelope J. Hitchcock

The global effort to stem the spread of HIV infection is arguably the most comprehensive, coordinated and costly response to a sexually transmitted infection in modern history. By contrast, the "global" effort to prevent and control the myriad of other sexually transmitted diseases (STDs) that have a disproportionate impact on women and their infants is remarkably small.

The HIV/AIDS epidemic has provided a number of opportunities to indirectly address other STDs. A dialogue about diseases that are sexually transmitted has begun and the infrastructure for the delivery of HIV/AIDS services, which can and is being used to deliver STD services, has been strengthened. Since the behaviors involved in sexual transmission are the same, effective behavioral interventions for HIV infection are having an effect on transmission of other STDs.¹ The male condom has been distributed and promoted: correct and consistent use of this device prevents HIV infection and gonorrhea and offers partial protection from some other STDs. And finally, as epidemiological data have accumulated linking other STDs to increased risk of HIV

infection, programs to control STDs are being strengthened.

However, because of or in spite of the HIV/AIDS epidemic, we have not managed to convince the world of the importance of other STDs, in and of themselves, and their impact on the health of women and infants. Gonorrhea, chlamydial infection, trichomoniasis, genital herpes, syphilis and human papillomavirus (HPV) infections cause infertility, cervical cancer and adverse outcomes of pregnancy, such as spontaneous abortion, prematurity and stillbirth. The morbidity, mortality and health care costs associated with these STDs are both enormous and underappreciated.

Most people are surprised to learn that HIV infection is not the only fatal STD. In 1996, 250,000 women worldwide will die of cervical cancer caused by HPV infection—considerably more than from AIDS. As a result of pelvic inflammatory disease, a frequent complication of gonorrhea or chlamydial infection, deaths due to ectopic pregnancy are extremely common in resource-limited settings in both the developed and developing world. Congenital syphilis, neonatal herpes infections and chlamydial



Vilas/UNICEF/5865

A mother and child in Orissa State, India. Too little attention is paid to the impact of STDs other than HIV/AIDS on the health of women and children.

respiratory infections, to name just a few, threaten the health and well-being of newborns.

Although surveillance data are not available in many countries, selected studies give some insight into the magnitude of the disease burden caused by sexually transmitted pathogens. For example, in an ongoing study in Uganda's Rakai District, over 53 percent of the women had at least one STD (see table on page 40). If these data are representative of other areas in the developing world where similar socioeconomic pressures and health care limitations prevail, our current estimates of disease burden are probably conservative.

Women at Increased Risk

A number of biological factors contribute to the increased susceptibility of women to sexually transmitted infection and disease. First, the volume of male ejaculate, which is deposited directly onto the vulnerable cervical tissues, is often much larger than cervical and vaginal secretions. One exposure is sufficient to transmit gonorrhea or chlamydial infection.

In addition, the reproductive tract of women is biologically engineered to permit two-way "traffic."

For example, sperm, the mucus of the fallopian tubes, the fluids of menses, and the fetus move up and down the tract. Physiological barriers impede the movement of harmful bacteria, viruses and protozoa, but these are imperfect.

Once an infection has been established, the anatomy of the female reproductive tract precludes ready visualization of damaged tissue. In the developed world, where pelvic examination, laparoscopy and other invasive procedures are common, this constraint can be overcome. However, these procedures are not available in the resource-limited settings that service the populations with the greatest disease burden. What's more, if these procedures are not done with the proper technique, they can result in iatrogenic transmission of infection.

The nature of the relationship between the female host and sexually transmitted pathogens is such that the infections often cause no symptoms or such mild ones that women do not seek health care. So, even if diagnostic procedures and therapy were available, many women would not have sufficient reason to seek them.

Biological factors also make it easy for women to pass on sexually transmitted infections to their unborn children. During the nine months of gestation there is ample opportunity for a pathogen to infect a fetus. In addition, even if it does not require an invasive procedure, the birth process involves exposure to blood, secretions and tissue that can harbor pathogens.

Biologically, women are particu-

larly susceptible to sexually transmitted infections; social, cultural and economic factors often increase their risk of exposure to these infections. In many parts of the world, women's economic and social dependence on men makes it difficult for them to avoid high-risk sex or to negotiate condom use with their partners. Cultural expectations that reinforce ignorance about sexual matters increase the likelihood that women will fail to recognize STD symptoms or avoid seeking treatment for STD.

Approaches to Prevention

Primary prevention

Currently the options for primary prevention are abstinence (for HIV and other STDs) or correct and consistent condom use (for HIV and gonorrhea). Since neither choice is compatible with conception, during the reproductive years women and their partners must choose between bearing children and risking infection. Without effective vaccines and noncontraceptive topical microbicides, this biological challenge has no obvious solution.

Secondary prevention

In the absence of appropriate tools to prevent acquisition of STDs, early diagnosis and treatment become critical parts of a prevention and control program. Effective strategies for early diagnosis and treatment of STDs are ideally based on rapid, inexpensive diagnostic tests that are appropriately sensitive and specific and on effective, affordable single-dose oral therapy. Such diagnostic tests do not exist. What's more, in resource-limited settings, effective treatment is often unavailable.

Ironically, for women who have no symptoms or symptoms that are not severe enough to prompt care-seeking, the availability of diagnostic tests is a moot point. There is an urgent need for inexpensive screen-

ing tests for women who report subtle symptoms, acquisition of new partners, risky behavior or suspected risky behavior of their partners. These tests would be used as an indication that confirmatory diagnosis and therapy were needed or, in high prevalence settings, as an indication for treatment.

In the meantime, in resource-limited settings health care providers may have limited to no diagnostic capabilities and must rely on syndromic management (see page 9). Unfortunately, this approach is less effective in women than men because of the paucity of clinical signs and symptoms and their lack of specificity.

By enabling providers to diagnose and treat men, syndromic management can play a role in preventing disease in women. However, the opportunity for symptomatic men who seek and receive STD services to notify their partners and refer them for treatment is all too often overlooked. Obviously these untreated women become sources of reinfection for their partners, but even more important, they are the victims of long-term complications.

Single-dose, oral therapies that are effective and inexpensive are essential to effective secondary prevention of STDs. Expecting people to comply with multi-dose treatments, especially in the face of asymptomatic infections that require seven days of twice-daily therapy, is a prescription for treatment failure and antibiotic resistance.

The advent of drugs such as azithromycin and ciprofloxacin is a breakthrough for STD control programs because they allow providers to administer single-dose therapy. Drugs such as cefixime that are known to be safe for use during pregnancy are critically important for preventing adverse outcomes of pregnancy due to STD. Although these drugs cost several dollars per

dose when purchased in the developing world—arguably more than tetracycline—for the most part we have not addressed whether we can afford them because their use has not been evaluated formally with cost-benefit, cost-effectiveness analyses.

Tertiary prevention

Tertiary prevention, or prevention of STD complications such as infertility and adverse pregnancy outcomes, is inextricably linked to secondary prevention. The potential impact of this approach was demonstrated recently in Seattle, Washington, where investigators used urine-based screening of women at risk for chlamydial infection to show that screening, case-finding and treatment are likely to reduce pelvic inflammatory disease.

Two studies are in progress that may support STD interventions early in pregnancy. One is examining the impact of STD mass treatment on pregnancy in a complementary mother/infant study in Uganda's Rakai District. The other, a U.S. study, is looking at the effect of therapy for bacterial vaginosis and trichomoniasis early in pregnancy.

We have made some progress in expanding syphilis screening of pregnant women to prevent congenital syphilis, but these efforts are terribly inadequate given the simplicity and affordability of test and therapy. More support for maternal syphilis screening is crucial.

Although pap smear screening and surgical interventions have been

very effective strategies for cervical cancer prevention in the developed world, the technical nature of the procedures and their expense preclude widespread use. As we learn more about the manifestations of infection by high-risk types of HPV, a simpler, less expensive strategy should emerge: 1) primary screening to determine whether a woman is infected with any type of HPV; 2) secondary screening of HPV-infected women to identify those infected with high-risk types; followed by 3) tertiary pap smear screening from a sample collected with a self-administered vaginal swab or tampon. For women with high-grade cervical lesions, referral to a regional facility for pelvic examination and treatment would be appropriate. Such a system of triage awaits technical advances, implementation, and cost-benefit and cost-effectiveness analysis.

Integration?

We are rapidly moving in the direction of combining reproductive health services. However, there is a paucity of data on the impact of integrating STD, HIV and family planning services into comprehensive reproductive health programs. From

Schytt/UNICEF/4998



Taking a client's blood pressure in an antenatal clinic in Zimbabwe. Rigorous evaluation is needed to determine whether STD diagnosis and treatment should be integrated into other health care services for women.

a biological perspective it makes sense to combine these efforts given the complex interrelationships between the diseases and pregnancy planning/prevention. Whether integration makes sense from the perspective of the user needs to be formally evaluated using rigorous methodology, including evaluation outcome measures.

The Future

HIV infection, which can arguably be viewed as a complication of untreated ulcerative and nonulcerative STDs, clearly can be addressed at the level of secondary STD prevention. When the cost-benefits of preventing HIV as well as infertility and adverse pregnancy outcomes are taken into account, the rationale for supporting STD research and prevention programs becomes compelling.

For those who continue to work in STD research and service delivery programs, there is a sense that we are at a crossroads of some sort. Recent results from Tanzania suggest that STD treatment as an HIV prevention intervention may be more effective than anyone imagined (see page 14.) Meanwhile, the results of the Rakai study are awaited—not only to show that the STD treatment effect can be reproduced, but also to demonstrate the correlation between decreased point prevalence of STDs and reduced sero-incidence of HIV infection. In addition, the Rakai study will tell us what is to be gained by treating asymptomatic infections (the majority of cases) and what secondary effects might be seen on reproductive health in terms of healthy babies.

On the other hand, a recent report by the U.S. National Institutes of Health shows that few research resources have been spent, aside from vaccine development, for HIV prevention. The report simultaneously echoes concerns that AIDS resources are being spent on non-

AIDS research. This leaves us with the unanswered question: Will we have the scientific commitment and the political and social strength to move forward with an STD prevention strategy that is aimed indirectly at HIV?

As we wait for the answer, it may be appropriate to articulate some of the important lessons of the HIV/AIDS epidemic:

- The opportunity for a new disease to emerge and be transmitted by “old” behaviors is ever-present.
- If we cannot prevent HIV infection everywhere, we cannot prevent it anywhere. And,

- If we cannot prevent other sexually transmitted diseases, we may not be able to prevent HIV infection.

Reference

1. Rosenberg, M.J., A.J. Davidson, J.H. Chen, et al. 1992. Barrier contraceptives and sexually transmitted diseases in women: a comparison of female-dependent methods and condoms. *American Journal of Public Health* 82:669.

Penelope J. Hitchcock, MD, is chief of the Sexually Transmitted Diseases Branch of the National Institute for Allergy and Infectious Diseases.

Preliminary STD Prevalence Estimates for Reproductive-Age Women (15-49 years old) In the Rakai District of Uganda**

Disease	Prevalence (percentage)
HIV Infection	23.1
Active Syphilis (RPR and TPHA confirmed)	11.8
Chlamydial Infection (in women 15-29 years)	~4
Trichomoniasis (culture)	~25
Bacterial Vaginosis (Gram stains grades 7-10)	~53
Chancroid (serology)	~21
Gonorrhea	data not available

*These preliminary, unpublished estimates were provided by Drs. Ronald Gray, Johns Hopkins University; Maria Wawer, Columbia University; and Nelson Sewankambo, Makerere University Medical School. Study supported in part by the National Institutes of Health AI34826-01S1A2.

+As additional data are analyzed, the prevalence estimates of these diseases may change. These results pertain to the randomized cohort and cannot be extrapolated to the Rakai District as a whole or to other rural areas of Uganda. This cohort is drawn from intermediate trading village populations predominantly along secondary roads. Based on earlier studies by this team of investigators, it is anticipated that these communities have lower HIV infection rates than the towns on the main roads but higher rates than the “off-road” rural villages.



Policy Profile

Haitians Reach Consensus on National STD Guidelines

by Frieda Behets

In February 1995, more than 70 Haitian health care providers and officials from medical and community organizations meeting at a seminar in Port-au-Prince agreed on the need for national STD guidelines outlining a new approach to diagnosis and treatment.

Just three years earlier, many of the same medical decision makers had resisted changes in the way STD cases were managed. But in the meantime, they had learned that lack of information about STDs often resulted in ineffective treatment throughout Haiti. During the seminar, they acknowledged that conditions in Haiti called for low-technology, more public-health-oriented approaches to STD management

than had been used in the past.

Having results from local studies that supported recommendations for new STD guidelines was the key to the shift in providers' attitudes, according to Dr. Eddy Génécé, AIDSCAP resident advisor in Haiti.

"The resistance was so strong at first," he said. "I think you overcome it with scientific proof."

Dr. Génécé also attributed providers' acceptance of the need for changes in STD management to communication among all groups interested in STD control in Haiti, frequent and consistent technical assistance and training, and support for Haitian health professionals' participation in international meetings where new approaches to STD con-

trol were discussed. These efforts led to the first national consensus on guidelines for managing STDs.

After the Coup

The consensus-building process began in 1992, the year after Haiti's first democratically elected president had been ousted by a military junta. Haitians were already beginning to suffer the effects of an international fuel embargo and sporadic political violence.

Not surprisingly, Haiti's response to STDs also was in disarray. There was no national STD control program. Little was known about the country's STD problem or about STD care in the public or private sector. Local health providers re-

ported that patients preferred self-medication, particularly for STDs. Ampicillin and tetracycline could easily be bought on the street.

Although other internationally sponsored development activities had been halted after the coup d'état, HIV prevention activities continued as part of donors' humanitarian assistance to Haiti. Direct collaboration with the military government was not permitted, but assistance could be provided through nongovernmental organizations (NGOs).

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Changing the behavior
of health care providers
is at least as difficult as
changing the behavior
of STD patients.

■

Therefore, when AIDSCAP decided to focus on STD control as part of its HIV prevention efforts, it looked for a strong private sector partner. The Centres pour le Développement et la Santé (CDS), a large NGO providing care to more than half a million poor, primarily urban Haitians, had the infrastructure and an interest in developing an STD control strategy.

"Our hope was that as CDS' STD control program became stronger, other institutions would want to join the effort," Dr. Gënëcé explained.

Controversial Recommendations

To learn more about STD case management practices in Haiti, researchers from AIDSCAP, CDS and the University of North Carolina at Chapel Hill (UNC) conducted an evaluation at five of CDS' primary health care centers in Cité Soleil. The research team interviewed health care providers, observed interactions between patients and providers, and reviewed laboratory logbooks and patient files.

The study revealed that more than 90 percent of the clinicians treated urethral discharge with penicillin or ampicillin, even though tests at the national reference laboratory showed that at least 60 percent of gonococcal strains were resistant to these antibiotics. Treatment of another cause of urethral and vaginal discharge—chlamydia infection—was essentially ignored. Sexual partners of STD patients were seldom referred for treatment and pregnant women were rarely screened for syphilis.

Based on these findings, an STD control strategy for CDS was proposed to an ad hoc advisory committee with representatives from CDS and other local NGOs, international donors and one traditional healer. The strategy would be implemented by training clinicians in comprehensive STD case management, including prevention education and counseling. Pregnant women would be screened for syphilis to prevent congenital syphilis and drug lists would be updated to include drugs effective against gonococcal infections.

Because of the limited laboratory diagnostic capabilities available in Haiti, the strategy was based on the syndromic approach to STD management. This approach involves treating for the most common causes of an STD syndrome during a patient's first visit to a clinic rather than trying to determine the exact cause of a group of symptoms and

signs. For example, clinicians were advised to prescribe drugs to treat both gonococcal and chlamydial infections in patients seeking treatment for urethral discharge or cervical infections.

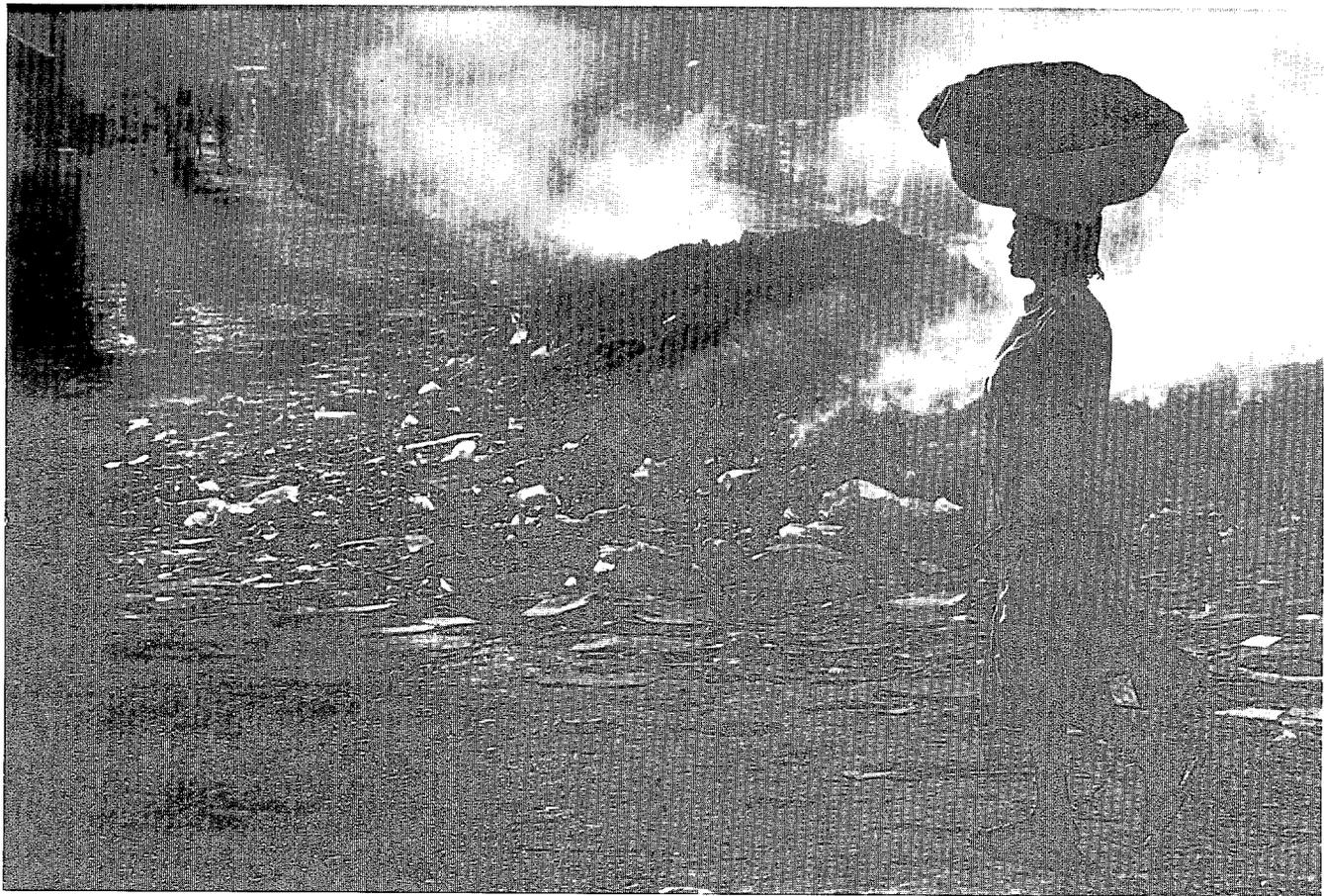
CDS accepted this proposal, which was based on the World Health Organization's (WHO's) algorithms for treating urethritis and cervical infections, but other members of the committee did not. Since none of the available local data showed the importance of chlamydial infection, many providers believed it was rare among Haitians. Others were simply opposed to using the syndromic approach to manage any STD syndrome, even though most acknowledged that laboratory tests were not always available and laboratory results were often unreliable.

New Findings

In 1993 researchers from AIDSCAP, CDS and UNC conducted a baseline survey of STDs among 1,001 patients at two CDS antenatal clinics. It was the first study to look at STD prevalence in a group drawn from the Haitian population rather than from STD patient rolls. Pregnant women were studied because they were easily accessible yet fairly representative of the population.

The survey found that almost half the women had at least one STD. Eleven percent tested positive for syphilis, 34 percent had trichomoniasis, 10 percent had chlamydial cervical infection and 4 percent had gonococcal cervical infection.

Perhaps most important was the finding that chlamydial infection was much more common than gonorrhea. This discovery validated the use of the WHO treatment algorithm in Haiti, helping convince local providers and decision makers that men with urethritis and women with cervical infection should be treated for both chlamydial and gonococcal infections.



A woman walks through the center of Port-au-Prince during a "general strike" enforced at gunpoint in October 1993. Despite political turmoil, Haitians were able to lay the groundwork for a national STD control program.

Sean Sprague/Panos Pictures

The study results were shared with health professionals working in STD control through formal and informal presentations. They were also published in CDS' magazine and in the *Journal of Infectious Diseases*.

Comprehensive Programs

Following the recommendations generated by the baseline survey results, CDS established a comprehensive STD control program. CDS staff received training and guidelines for providing STD care at the primary health care level. Because clinicians might not have time to focus on prevention, nurse-counselors were trained to counsel patients and their partners and to promote safer sexual behavior and condom use.

CDS also reinstated systematic

prenatal syphilis screening at its antenatal clinics. The Pan American Health Organization (PAHO) donated a one-year supply of drugs for treating common STDs; CDS was able to replenish its stocks by charging patients a modest sum for drugs.

In 1994, a coalition of 13 NGOs working on HIV/AIDS prevention in Haiti's Central Plateau began a similar STD control program, including prevention education for STD patients and their partners and syphilis screening for pregnant women. Again PAHO provided a one-year supply of STD drugs, and most NGOs instituted a cost-recovery system.

After two and a half years, an evaluation showed that STD case management in CDS centers had improved significantly. The percent-

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"By providing training
to physicians, nurses
and social workers,
we created
a core group
that helped us move
to consensus."
□



A condom promotion poster at a clinic in Port-au-Prince.

Sean Sprague/Panos Pictures

age of clinicians treating urethral discharge properly had increased from less than 10 percent to 69 percent. In the newer NGO coalition program, 56 percent of the clinicians who were evaluated reported giving effective treatments for urethral discharge. Clinicians and nurse-counselors in both programs were promoting condom use.

From 1992 to 1995, AIDSCAP sponsored the training of more than 400 Haitian clinicians, counselors and laboratory technicians from CDS, the NGO coalition, and other Haitian institutions in the skills needed to provide comprehensive STD services. Most of the training was done in Haiti at the national center of excellence in STD research, training and counseling, an institution well known for its HIV/AIDS

research under the name of Cornell-GHESKIO (Groupe Haitien d'Etudes de Sarcome de Kaposi et des Infections Opportunistes).

Dr. Génécé estimates that 90 percent of the NGOs in Haiti have a staff member trained in STD treatment and prevention at Cornell-GHESKIO. "By providing training to physicians, nurses and social workers, we created a core group that helped us move to consensus," he said.

Toward Consensus

Despite the progress made by CDS and the NGO coalition in the Central Plateau, in 1995 there was still no standardized approach to STD diagnosis and treatment in Haiti. Each of the three groups providing most of the STD care in the coun-

try—CDS, the NGO coalition and Cornell-GHESKIO—was using different treatment algorithms. CDS and the coalition had adopted the syndromic approach, but many of the national reference center's algorithms involved laboratory diagnosis.

To encourage the NGOs to agree on a standard approach to STD case management, AIDSCAP convened a seminar in February 1995 on management of nonulcerative genital infections in women. It was during this seminar that some clinicians learned for the first time that chlamydial infection was more prevalent than gonorrhea in Haiti and that most strains of gonorrhea were resistant to penicillin. After discussing the Cité Soleil findings and their own experiences in the field, participants agreed that they should

adopt a syndromic approach to STD case management.

Representatives of the local PAHO/WHO office, Cornell-GHESKIO, CDS, the Central Plateau NGO coalition, UNC and AIDSCAP formed a working group to develop national guidelines for STD case management. In the fall they were joined by officials from the Ministry of Health of the newly restored democratic government. The guidelines were presented and discussed at a second seminar for health professionals and medical decision makers held in collaboration with the Ministry of Health in November 1995.

Adoption of these guidelines will further improve STD case management in Haiti, but does not guarantee that all health care providers will follow the guidelines. Indeed, experience shows that changing the behavior of providers is at least as difficult as changing the behavior of STD patients. For example, clinicians are often reluctant to give up

laboratory diagnosis even when it is substandard and incomplete. Because of relatively high personnel turnover in some clinics, many newly hired clinicians have not yet learned the new approach to STD care. This problem could be addressed by updating the content of STD training at the local medical school. Continued provider education and field supervision are critical.

Policy Lessons

The experience leading to the adoption of national STD guidelines in Haiti offers a number of policy lessons. First, it is not unusual for policy agreement and adoption to take many months or even years. In Haiti, the consensus-building process took three years.

A strategy for achieving a desired policy goal is essential. In Haiti, the STD strategy included working with strong local partners, conducting local studies, presenting and disseminating study results to key au-

diences, training and consensus building.

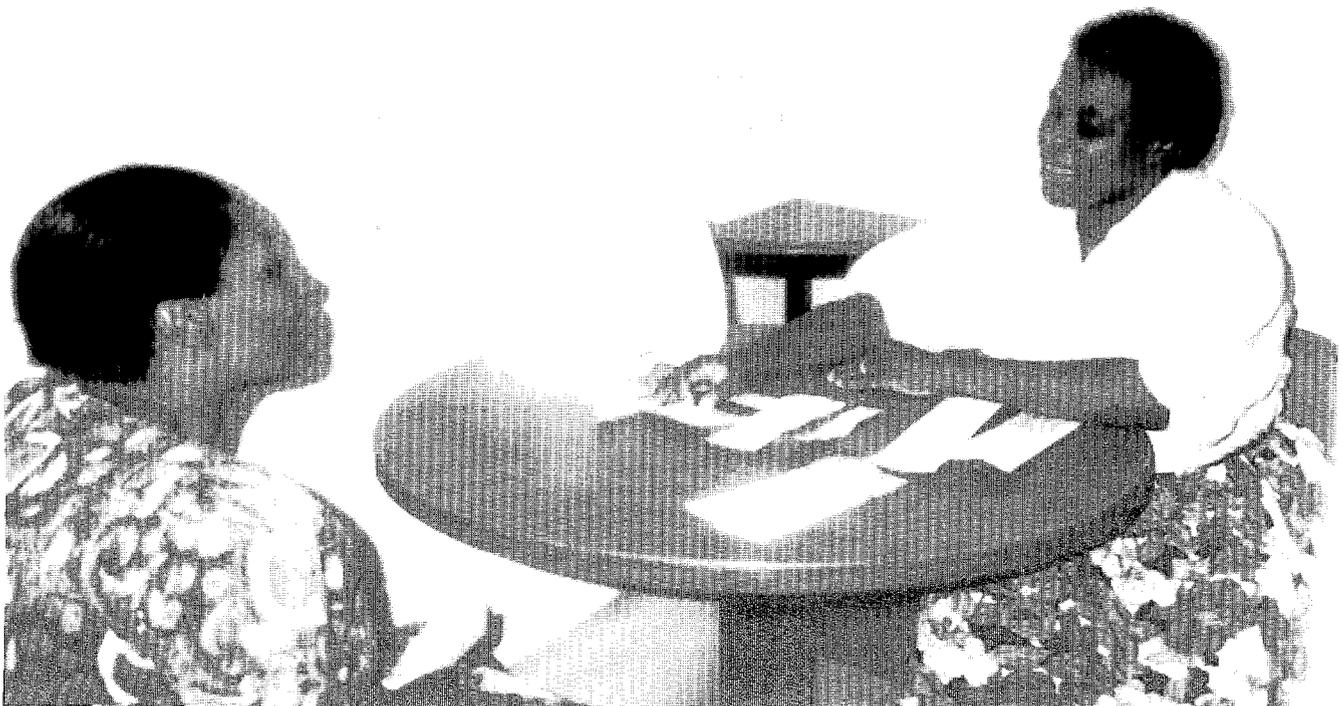
Haitian program specialists played a central role in moving the proposed policy agenda. The existence and persistence of a core group of committed individuals helped convince skeptics of the importance of the new approach to STD treatment.

Most national health guidelines are developed by the Ministry of Health. Because of the political situation, development of Haiti's STD guidelines began with local institutions, who later collaborated with the Ministry of Health—a novel bottom-to-top approach. The essential groundwork has been laid, and the government and NGOs can now work together to build a national STD control program. ■

Frieda Behets, MPH, is a research instructor at the University of North Carolina at Chapel Hill, an AIDSCAP Project subcontractor. She has provided technical assistance in STD control in Haiti, Jamaica and Malawi.

A counseling session in a Haitian clinic.

Hally Mahler/AIDSCAP



Vancouver Conference: Unity in Diversity

"One Hope, One World" is the theme for the XI International Conference on AIDS, to be held in Vancouver, Canada, July 7-12, 1996.

The planners announced four principles—excellence, practicality, sustainability and solidarity—to serve as focal points for priorities and decision making throughout the conference. Workshops, presentations and panels have been organized into four distinct tracks: basic science, clinical science, epidemiology and public health, and social research, policy and action.

The conference theme reflects the organizers' belief that it is only through the interchange of ideas and experiences among people from diverse disciplines and cultures that solutions to AIDS can be found.

For more information on the conference, contact the Conference Secretariat, IXth International Conference on AIDS, P.O. Box 48740, 595 Burrard Street, Vancouver, BC Canada V7X 1T8. Telephone: 800-780-AIDS (Canada/U.S.) or (604) 878-9995 (worldwide); fax: (604) 668-3242; Internet: aids96@hivnet.ubc.ca; or World Wide Web site: <http://unixg.ubc.ca:780/~aids11/aids96.html>.

Among the wide variety of conference satellite activities will be a two-day symposium, "The Status and Trends of the Global HIV/AIDS Pandemic," cosponsored by AIDSCAP, the François-Xavier Bagnoud Center for Health and Human Rights of the Harvard School of Public Health and UNAIDS. For more information on the July 6-7 gathering, contact Deborah Murray at AIDSCAP at (703)516-9779 by telephone or (703)516-9781 by fax.

Resources

The World Health Organization (WHO) STD Case Management Course.

This course is designed to train primary health care personnel in STD care. It will help participants develop skills in interviewing, history-taking and diagnosis; use the seven syndromic flow charts to diagnose and treat a patient with an STD; educate and motivate patients about prevention and treatment of STD; and understand the value of recording the number of STD cases seen. The course consists of seven workbooks, copies of all the WHO syndromic management flow charts, and a trainer's guide for facilitators. These materials can be used for self-learning, distance learning or a facilitated training course. The course books are now available in English and will be available in French, Spanish and Portuguese by mid-1996. They can be requested at no charge to those from developing countries from Dr. Antonio Carlos Gerbase or Dr. Monir Islam at WHO or from Dr. Johannes Van Dam, UNAIDS, all at 20 Avenue Appia, CH-1211, Geneva 27, Switzerland.

Sexually Transmitted Diseases: What You Need to Know. Education Programs Associates.

This eight-page booklet describes what STDs are, how they are transmitted, what to do if you have an STD, and how to prevent STDs. It emphasizes the need for sexual partners to communicate with each other about using condoms for STD protection. Booklets are available in English and Spanish for 55 U.S. cents from Education Programs Associates, 1 West Campbell Avenue, Suite 40, Building D, Campbell, CA 95008-1039, U.S.A.

Counseling Family Planning Clients About STDs. Population Action International (PAI).

This report, part of PAI's policy information series, discusses the importance of counseling family planning clients about STDs. The publication is available free to people in developing countries and for U.S.\$3.00 to others from Carolyn Ross, Population Action International, 1120 19th Street, NW, Suite 550, Washington, DC 20036.

Counseling and Sexuality: A Training Resource. International Planned Parenthood Federation (IPPF).

This resource packet contains four videos and a 140-page guide designed to help expand contraceptive method counseling programs to address sexuality. It offers guidelines for counseling clients about sexuality and STDs and for addressing related policy and management concerns. The packet is available for U.S.\$100. The guide can be purchased separately for U.S.\$10.00 and the videos for U.S.\$35.00 each from the IPPF Distribution Unit, P.O. Box 759, Inner Circle, Regent's Park, London NW1 4LQ, UK.

Reproductive Health and HIV/AIDS: Myanmar Training Manual. UNICEF and the Thai Red Cross Society Program on AIDS.

This manual targets facilitators and trainers working in health promotion with youth and women. It provides information about reproductive health, STDs, HIV/AIDS and other issues crucial to the lives of sexually active youth. Single copies in English are available free from UNICEF, 132 University Avenue, P.O. Box 1435, Yangon, Myanmar.

Facing the Challenges of HIV/AIDS/STDs: A Gender-Based Response. The Royal Tropical Institute (KIT).

This resource packet is designed to help policy makers and program planners and implementers incorporate a gender-based approach to HIV/AIDS and STDs into their policies and programs. The packet includes personal testimonies from women affected by HIV/AIDS, a 52-page manual, posters and tool-cards. It focuses on how differences in the roles, status, economic power and social expectations of men and women affect and are affected by the epidemic. For information, contact KIT, Mauritskade 63, 1092 AD Amsterdam, the Netherlands.

The Manual for Targeted Intervention Research (TIR) on Sexually Transmitted Illnesses with Community Members. AIDSCAP, Family Health International.

The TIR is small-scale social science research conducted specifically to assist in the design and implementation of STD programs. It uses different qualitative and quantitative research methods and may be conducted in a relatively short period of time. This manual is laid out in a step-by-step fashion to help public health professionals use TIR to understand the community perspective on STDs and STD services, and to incorporate this understanding into the design and implementation of STD programs. Available free from AIDSCAP, Family Health International, 2101 Wilson Boulevard, Suite 700, Arlington, VA 22201.

**Control of
Sexually Transmitted Diseases:
A Handbook for the Design
and Management of Programs.
The AIDS Control and Prevention
(AIDSCAP) Project
Family Health International.**

A comprehensive handbook on STD management and control will be launched at the XIth International AIDS Conference in Vancouver, Canada, by the AIDSCAP Project.

Targeting managers and project designers, the book describes how to design, implement and monitor STD programs in developing countries. It addresses the full spectrum of issues that STD managers at the national and local levels must consider to execute effective STD control programs in resource-poor settings.

Edited by Gina Dallabetta, Marie Laga and Peter Lamptey, the handbook addresses many technical issues but is not intended as a technical reference text. With an emphasis on the syndromic approach to STD control, it provides an overview of topics such as training, surveillance, curative and preventive services, and evaluation. The handbook offers guidance to anyone with an interest in STD control, including people working in family planning and child survival and with donor groups. Single copies will be available free to selected individuals and institutions in July 1996.

Correction:

In the November 1995 issue of *AIDScaptions*, the case was overstated for the value of vaginal lavage in preventing perinatal transmission of HIV. Recent research shows only limited efficacy of vaginal lavage in very specific medical situations.