SHARING PATH'S EXPERIENCES WITH THE GLOBAL HEALTH COMMUNITY

DIRECTIONS IN GLOBAL HEALTH

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Lito C. Uyan

INSIDE:

PREVENTING HIV AND AIDS IN THE PHILIPPINES

Ten Years of Outreach, STI Management, and Advocacy Keep HIV Prevalence Low

While HIV and AIDS rates increase in many countries, the Philippines has maintained a prevalence rate of less than one percent in the general population.[1] Part of this success can be attributed to the AIDS Surveillance and Education Project (ASEP), which has worked to prevent the spread of HIV in the Philippines.

PATH and its partners administered ASEP's educational component in the Philippines' eight largest cities. Since 1993, the project's activities—including communication for social change, sexually transmitted infection (STI) management, and policy advocacy—have reached more than a third of the country's high-risk population. Monitoring data and an independent evaluation indicate that ASEP activities have influenced knowledge and practices that reduce infection transmission.[2]

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EVALUATING A MALARIA VACCINE CANDIDATE

Accelerating vaccine development to save lives

PROJECT NAME
Malaria Vaccine Initiative

LOCATION
Global

METHOD
Preclinical and clinical development of candidate malaria vaccines

PARTNERS
Pharmaceutical and biotech companies, research/academic institutions, and government agencies

FUNDER
The Bill & Melinda Gates Foundation

Malaria kills more than one million people each year. The vast majority of these are children under the age of five years.[1] Prevalence rates are high throughout sub-Saharan Africa, where the malaria parasite is endemic.

Prevention and treatment of malaria are crucial to control efforts. Their long-term impact is limited, however, particularly as resistance to drug treatment increases. Because malaria is caused by a complex multicellular parasite, developing a vaccine to prevent the infection is especially challenging. Yet PATH's Malaria Vaccine Initiative (MVI), its partners, and other malaria researchers are proving that it is possible to create an effective malaria vaccine. Advances in vaccine development and biotechnology—such as new cell-culture techniques, DNA modification, and the mapping of the malaria genome—make a vaccine against malaria more feasible now than ever.

MVI is currently working with nine vaccine development partnerships that span five continents. To date, MVI's projects have resulted in eight vaccine formulations in the vial, seven of which are in clinical trials.

A leading vaccine candidate: RTS,S

In 2001, PATH's MVI joined forces with GlaxoSmithKline (GSK) Biologicals to pursue development of malaria vaccine candidate RTS,S/AS02A. RTS,S is a pre-erythrocytic vaccine designed to protect against infection and clinical disease by targeting *Plasmodium falciparum*, the most deadly malaria parasite. AS02A is a novel proprietary adjuvant developed by GSK Biologicals.

RTS,S has been in development since 1989 and entered clinical trials in 1995. Trials in the United States, Belgium, and Kenya demonstrated the vaccine's safety in adults. Trials with adult men in The Gambia showed that the vaccine is also efficacious; it protected most participants for two months, after which time protection waned.

Initial safety data from Phase 1 trials in children in The Gambia and Mozambique are encouraging. So far, the trials have shown the candidate vaccine to be safe and able to generate an immune response in children. It is possible that, due to differences in their immune system, children could be protected from infection longer than adults or protected from severe disease. Even if the vaccine were to only limit rather than prevent the parasite's invasion, many children could be saved.

Phase 2 pediatric trial begins in Mozambique

In July 2003, MVI and its partners began a Phase 2 clinical trial in Mozambique to test the efficacy of the candidate vaccine in children. During the trial, approximately 2,000 children aged 1 to 4 years were randomized to receive RTS,S or another beneficial vaccine that has no effect on malaria. The protocol has passed ethical review boards in Mozambique, Spain, and the United States, and is in full compliance with the investigational new drug regulations of the U.S. Food and Drug Agency (FDA).

Several factors make Mozambique an ideal location for the trial. The scientists at the Centro de Investigaçao em Saude de Manhiça are recognized around the world for the quality of their work, and the Mozambique Ministry of Health is eager to be part of the solution to malaria. In this country where malaria

In Mozambique, MVI is evaluating a malaria vaccine candidate that has shown promise in both pediatric and adult clinicial trials. The vaccine was previously shown to be safe and efficacious in adults.

transmission occurs year round, an estimated 60 percent of all people seeking medical care are diagnosed with the infection, and malaria patients occupy about 40 percent of the nation's hospital beds.

The impact of public- and private-sector partnerships

The progress of this vaccine candidate is a direct result of the partnership between the public sector and industry. Walter Reed Army Institute of Research and GSK Biologicals collaborated on the vaccine's early development. Currently, GSK Biologicals is providing proprietary technology (the vaccine candidate) and expertise in vaccine development and manufacturing, while MVI is providing financial support, collaborative management, and a commitment to developing a vaccine for the children most at risk for malaria. Together, MVI, GSK Biologicals, and their partners are working to develop a vaccine that could have a tremendous impact in regions where malaria is endemic.

Next steps

The results of the Phase 2 pediatric trial will be available in late 2004. While the world is still several years away from a licensed malaria vaccine, this trial is a critical step forward. If RTS,S is shown to be effective in the Mozambique trial, researchers will conduct trials in other African countries. If the outcomes of these trials confirm the vaccine's efficacy, GSK Biologicals and MVI will work together to ensure that the vaccine is licensed, produced in sufficient quantities, and made available at an affordable price throughout the developing world.

As these activities progress, MVI is continuing to advance a portfolio of other promising malaria vaccine candidates that are in various stages of development. ■

Reference

1. WHO. *Roll Back Malaria* website. http://mosquito.who.int/. (Accessed November 2003).

For more information, visit www.malariavaccine.org, or contact Carol Hooks, MVI's communications officer, at chooks@malariavaccine.org.

INCREASING YOUTH ACCESS TO SERVICES

Strengthening pharmacies' capacity to serve youth

PROJECT NAME
RxGen: Reaching Youth Through Pharmacies

LOCATION
Cambodia, Kenya, Nicaragua, Vietnam

METHOD
Capacity building

PARTNERS
Local NGOs, ministries of health, pharmacy associations, and universities

FUNDER
The William and Flora Hewlett Foundation

Adolescence is a period marked by creativity, energy, and resilience. It's also a time of challenges. Complications from pregnancy, childbirth, and unsafe abortions have become the major causes of death for girls aged 15 to 19,[1] and rates of sexually transmitted infections (STIs) are highest among young people aged 15 to 24.[2] By increasing adolescents' access to information and services, PATH is working to reduce their risk of unintended pregnancy and infection.

The RxGen model

In many developing countries, pharmacies serve as a primary source of health services and supplies. Pharmacies offer convenience, affordability, and anonymity—characteristics that make them particularly appealing to youth. Pharmacy staff are also well placed to help youth address critical needs arising from unprotected sex, such as emergency contraception (EC), STI-risk assessment, and ongoing use of contraception.

To increase youth access to reproductive health information and products, PATH developed and tested a model for building the capacity of pharmacists and pharmacy staff to deliver these services in a youth-friendly manner. PATH's approach focuses on partnering with public- and private-sector groups—including local nongovernmental organizations (NGOs), ministries of health, private-sector pharmacy associations, and universities. In collaboration with these partners, PATH developed training and outreach strategies, referral networks, and sustainability plans. The approach was adapted to local settings and tested in Cambodia, Kenya, and Nicaragua.

Training pharmacy staff

PATH developed a comprehensive training curriculum for pharmacists and pharmacy counter staff that focuses on strengthening their capacity to provide appropriate reproductive health services, information, and, when needed, referrals for clinical services. Participating pharmacists signed a Memorandum of Understanding to demonstrate their commitment to the program.

During the first three years of the six-year project, PATH trained more than 1,000 pharmacists and staff from approximately 530 pharmacies registered with ministries of health.

Developing referral networks

PATH also worked to develop referral networks linking youth to clinical services. In Cambodia and Nicaragua, pharmacies now distribute referral coupons for services at a partner organization that provides youth-friendly care. In Kenya, pharmacy staff use coupons that direct youth to clinics in the vicinity.

Raising awareness among youth

To increase young people's knowledge of reproductive health issues as well as the services that pharmacies provide, PATH and its local partners developed a logo designating participating pharmacies as youth-friendly. Local organizations and peer educators promoted the logo and pharmacy services through their outreach activities, and pharmacies themselves distributed educational material created by PATH and its partners.

Increased knowledge, improved service

To assess the project's impact, PATH assessed the knowledge and attitudes of pharmacy personnel before and after training, sent "mystery shoppers" to pharmacies, conducted in-depth interviews with pharmacy counter staff, and held focus-group discussions with pharmacy owners and pharmacists.

Evaluation data indicate that the project increased pharmacy personnel's capacity to provide high-quality reproductive health services to youth. Data suggest that pharmacy staff gained knowledge of EC, STIs, and ongoing contraception. In all three countries, for example, knowledge of EC increased considerably. Before the training, initial assessment data showed that 0 to 30 percent of pharmacy staff provided correct EC products; after the training, about 80 percent of pharmacy staff gave mystery shoppers correct products.

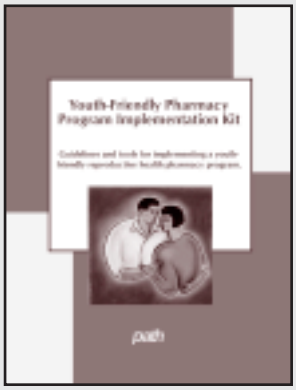
Similarly, mystery shopper reports showed that more than half of pharmacy staff in each country spontaneously offered information about STIs when shoppers sought services after unprotected sex. Evaluation results also showed that services were being provided in a youth-friendly manner, with at least 75 percent of mystery shoppers in all three countries reporting a positive experience in the pharmacies.

Lessons learned

PATH's experiences highlight several lessons for future applications:

- Pharmacy staff are eager to participate in capacity building. They gain satisfaction from providing good care, and they appreciate opportunities to promote their services.
- Refresher training, monitoring, and supervisory visits are essential to pharmacists. Reinforcing the technical aspects of the training, particularly around EC, is especially important.
- Staff turnover is a challenge to maintaining technical accuracy and service quality. PATH is working with local partners to establish mechanisms that ensure periodic training and updates.
- Raising awareness among youth is an important, ongoing need.

THE RXGEN TOOLKIT



To help other groups replicate and adapt the RxGen model in other regions, PATH has developed the *Youth-Friendly Pharmacy Program Implementation Kit*. Available in both English and Spanish, the kit contains a description of start-up strategies and activities; five teaching modules on adolescent health, customer-relations skills, EC, STIs, and ongoing contraception; handouts and job aids; prototype materials; and evaluation instruments.

The kit photocopies well and is available in the publications catalog on PATH's website (www.path.org). CD-ROM copies can be obtained from info@path.org. ■

Ensuring sustainability

PATH's RxGen team is building on the project's first-phase successes by incorporating the training curriculum into undergraduate pharmacy courses and continuing education programs for pharmacists and pharmacy staff. In Cambodia, the team helped negotiate a collaboration between the Pharmacists Association of Cambodia and the Faculty of Pharmacy at the University of Health Science in Phnom Penh. Both organizations have adopted the curriculum into their programs. PATH is also working to have the curriculum institutionalized in Kenya and Nicaragua.

Currently, PATH is expanding project activities into Vietnam and other areas in Cambodia, Kenya, and Nicaragua. ■

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1. United Nations Children's Fund (UNICEF). Early marriage: child spouses. *Innocenti Digest*. No. 7 (March 2001).
2. United Nations Population Fund (UNFPA). *Fast Facts*. Available at www.unfpa.org/adolescents/facts.htm. (Accessed November 2003).

For more information, contact Jolene Beitz, PATH program associate, at jbeitz@path.org.

ADVANCING THE ULTRA RICE™ TECHNOLOGY

A promising solution for micronutrient deficiencies

PROJECT NAME
Ultra Rice™

LOCATION
Latin America, Asia

METHODS
Food fortification, public-private partnerships

PARTNERS
Ministries of health, government and regulatory agencies, NGOs, and private-sector companies

FUNDERS
The Bill & Melinda Gates Foundation (with initial support from the Micronutrient Initiative)

Rice is the staple food for more than half of the world's population. Because many populations that face malnutrition consume rice, PATH has helped develop a micronutrient fortification vehicle—Ultra Rice™—and is working to make the technology available to rice-consuming communities around the world.

Addressing micronutrient deficiencies

Malnutrition is a serious threat to the health, development, and productivity of millions of people worldwide. Malnutrition results in poor physical and cognitive development as well as lowered resistance to illness. In the developing world, an estimated 174 million children under five are malnourished, and more than half of the 12.2 million deaths that occur among children under five each year are associated with malnutrition.[1]

One approach to alleviating malnutrition is fortifying food with micronutrients. Fortification can be cost-effective when implemented on a large scale, and it generally does not require consumers to modify their purchasing or eating habits. However, successful fortification of rice with conventional methods has proven problematic, as micronutrients applied to the surface of grains tend to wash away during the traditional rinsing of rice before cooking.

Overcoming the challenges of fortification

Since 1994 PATH has been working to add nutritive value to rice using the Ultra Rice technology. Ultra Rice premix is a fortified, manufactured rice product made from dough consisting of rice flour, binders, selected micronutrients, and other nutrient-protecting ingredients. After the dough is formed, it is extruded through a special die, cut into rice-shaped kernels, and dried.

The final Ultra Rice "grains" resemble natural milled rice grains in both size and shape. They are blended with white rice in a ratio of 1:100. When cooked, fortified rice is nearly identical to unfortified rice in taste and texture. Yet a single serving of rice fortified with Ultra Rice premix may provide up to one-third of the U.S. Food and Nutrition Board-recommended dietary allowance of the included micronutrients.

A primary benefit of the Ultra Rice technology is its ability to protect micronutrients within the manufactured grain. In addition to preventing nutrients from being rinsed away, the Ultra Rice structure shields sensitive micronutrients from degradation during storage.

To date, two premixes have been developed. One carries vitamin A; the other carries thiamin, folic acid, and zinc. PATH is currently working to improve an iron-bearing premix. PATH may also develop premixes to carry additional micronutrients that address local deficiencies.

Bringing Ultra Rice premix to market

To reach nutritionally vulnerable populations, PATH identifies markets and works to license the manufacturing technology of Ultra Rice premix to selected commercial partners, expecting that market-driven commercial production can ultimately help support sustainable distribution to populations in need.

In 2002, PATH's Ultra Rice team secured an agreement with Unión de Arroceros, a commercial rice miller in Bogota, Colombia. Through this agreement, PATH provided the Ultra Rice technology and technical assistance as the miller started up an industrial-scale operation for manufacturing the premix. In exchange for the Ultra Rice technology, Unión de Arroceros has committed to supply the fortified rice at a cost that is affordable to social programs.

More recently, PATH obtained regulatory approval for the introduction of Ultra Rice premix into Brazil, and efforts to select a commercial partner are underway. PATH continues to explore the feasibility of introducing Ultra Rice into China, West Africa, India, and other rice-consuming areas in which documented micronutrient deficiencies, appropriate manufacturing technology, and public-sector support exist. In addition, PATH is refining formulas and exploring ways to reduce production costs. ■

Reference

1. World Health Organization (WHO). *Child Malnutrition: Fact Sheet No. 119*. (November 1996). Available online at www.who.int/inf-fs/en/fact119.html.

For more information about the Ultra Rice technology, please contact David Wiese, Ultra Rice program manager, at dwiese@path.org.

Malnutrition is a serious threat to the health and well-being of millions of children in the developing world. By providing vitamin A, thiamin, folic acid, and zinc, two Ultra Rice premixes offer the potential to alleviate micronutrient deficiencies in rice-consuming regions.

USING THEATER TO ENCOURAGE SOCIAL CHANGE

Educational theater increases acceptance of family planning

PROJECT NAME
Benin Integrated Family Health Program

LOCATION
Benin

METHODS
Communication for social change, participatory monitoring

PARTNERS
University Research Co., LLC, Cooperative League of the USA, Beninese Association for Promotion of the Family

FUNDER
USAID, through the University Research Co., LLC

Public health programs are using theater to disseminate information, encourage dialogue at the community level, and challenge social norms that encourage unhealthy behavior. In villages that lack access to television or cinema, community theater offers a unique opportunity to capture an audience's attention and explore complex health issues. With up to 300 villagers attending each performance, PATH has found that communities find educational theater entertaining as well.

Conveying important health messages

Since the spring of 2002, more than 55,000 people in 170 villages in Benin have attended *Spacing Our Children*, an educational play designed to increase use of family planning. The play is being produced in two northern provinces of Benin, where literacy rates are low and the modern contraceptive prevalence is only 7 percent. Maternal-mortality rates in Benin are 884 per 100,000 live births; 45 percent of women aged 20 to 24 give birth before age 20.[1]

As a subcontractor to the University Research Co., LLC, PATH is working with the popular Troupe Bio Guerra to create and tour the production. Performed in the Bariba language, the play introduces villagers to five contraceptive methods and illustrates the benefits of birth spacing and planning family size. Audience members have an opportunity to reflect on how contraception ensures the health and well-being of infants and mothers, and saves money so parents can educate their children and establish a foundation for their own economic security.

In addition to covering basic family planning topics, the messages are tailored to local circumstances. During PATH's preliminary qualitative research, results indicated that men's resistance is an obstacle for some women who wish to use contraception. As a result, the play emphasizes the husband's responsibility in

SPACING OUR CHILDREN: THE STORY

The play's two central characters are brothers with divergent viewpoints and life situations. One is a mild-mannered, well-respected man who uses condoms and has a small, healthy family. The other is his obstinate brother Sacca, who refuses to consider contraception because he fears his wife will be unfaithful. Sacca has more than a dozen children, a sick wife, and constant financial difficulties. Throughout the play, Sacca interacts with three positive role models: his brother, his sister-in-law, and a community-based volunteer who promotes five accessible modern methods


Siri Wood

of family planning. Ultimately, Sacca recognizes the benefits of birth spacing and commits to adopting healthier behavior. ■

family planning. Humor ensures that the audience members keep laughing while they consider the many facets of these issues.

After each performance, the actors lead short discussion groups that are segmented by age and sex. During the discussions, audience members exchange stories, ask questions, and clarify what they learned from the play.

Siri Wood

To help young people and women express their concerns and clarify their values, the actors bring audience members together for post-theater discussions in five separate groups: elders, married men, unmarried men, married women, and unmarried women.

Increasing understanding

PATH has used participatory monitoring and evaluation to refine the play and measure its impact. Results show that the play is increasing understanding.

Project staff train the actors to administer rapid pre- and post-performance oral surveys to 25 individuals in each village. Analysis of nearly 2,000 pre- and post-performance surveys indicates that participants' ability to cite contraceptive methods improved dramatically. In the case of the intrauterine device (IUD), for example, the proportion of audience members who said they were familiar with the method increased from 2 to 100 percent.

The play also appears to be influencing self-reported social norms and health behaviors. Before the play, only 27 percent of married people said they had discussed contraceptives with their spouses. After the performance, 61 percent intended to do so. Similarly, before the play, 84 percent of respondents were planning to have more than four children. After the performance, two-thirds wanted a maximum of four children.

To sustain healthy behaviors, PATH reinforces the messages by simultaneously broadcasting radio shows, distributing printed educational materials, and arranging home visits by community health volunteers. Interviews with villagers several months after the theater tour suggest that recollection of the story and messages continues to be high.

Sustaining the impact

When this initial project ends, Beninese audiences will continue to enjoy and learn from theater because PATH has built the theater troupe's capacity to write, direct, and tour educational plays. The project also trained the troupe to use participatory monitoring tools to improve the quality of their own performances. Already, Troupe Bio Guerra independently tours *Spacing Our Children* and an additional play on HIV prevention, covering costs by charging audience members a small fee at the door. In addition, the troupe has translated the plays into French to reach even more villages.

This work is part of the USAID-funded Benin Integrated Family Health Program, which aims to increase overall demand for and use of family health services and products, including family planning. ■

Reference

1. USAID Population, Health and Nutrition Information (PHNI) Project. *USAID Country Health Statistical Report: Benin.* Washington, DC: PHNI (October 2003).

For more information about the project's communication activities, please contact Siri Wood, PATH program officer, at swood@path.org.

continued from front page

PROJECT NAME
AIDS Surveillance and Education Project (ASEP)

LOCATION
Eight cities in the Philippines

METHODS
Communication for social change, social marketing, policy advocacy, interpersonal communication and counseling

PARTNERS
Local NGOs and NGO clinics, private pharmacies, pharmacy associations, Philippines Department of Health, local city health offices, private-sector groups

FUNDERS
USAID, the Dutch Government, and the Japan International Cooperation Agency

Communication for social change

Data from the early 1990s indicated that few Filipinos had specific knowledge about prevention or treatment of HIV.[3] To reach populations engaged in high-risk behaviors, PATH trained community health outreach workers and peer educators to interact with female and male sex workers, their customers, men who have sex with men, injecting drug users, and sexually exploited children under 16. Outreach workers and their volunteer peer educators walked through assigned areas; interacted with potential clients; distributed educational materials and condoms; and referred clients for counseling, STI care, and other services.

As of March 2003, PATH and its partners had trained 2,169 outreach workers and peers who had collectively:

- Reached 423,093 individuals.
- Provided 33,177 STI referrals.
- Distributed 7,477,361 condoms.
- Encouraged more than 500 entertainment establishments to promote condom use without exception.
- Developed 122 different educational materials and distributed 1,674,290 copies.

Annual behavioral surveys that monitored the impact of these activities indicated that condom use increased dramatically, especially during the last years of the project. Across all risk groups and sites, survey respondents exposed to ASEP's work were more likely to have used a condom during their most recent sexual encounter with a commercial partner and to have sought appropriate treatment for STI symptoms than respondents with no program exposure. All female respondents exposed to the program were more likely to use contraception and to refuse sex with partners who would not use condoms.[4]

PATH and its partners also mobilized more than $11 million of pro bono media placements and conducted mass-media campaigns to increase public awareness of HIV and AIDS prevention and STI-symptom recognition. A 1999 survey found that 35 to 45 percent of television viewers remembered seeing the STI advertisements. Of those who saw the ads, 79 percent gave correct answers when asked what they would do if they or their partner had STI symptoms.

STI management

Because initial surveillance data revealed high STI rates and low treatment levels, PATH added STI management to the project's prevention strategies. PATH developed and tested training curricula based on World Health Organization (WHO) guidelines and materials. The four curricula were tailored to health professionals, nongovernmental organization (NGO) staff, pharmacists, and pharmacy staff, and included information on STIs, history taking, referrals, and the "four Cs" of STI syndromic case management: counseling, compliance, condom promotion, and contact tracing (partner notification).

The Professional Regulatory Commission of the Philippines accredited PATH as a provider of continuing medical education for the STI-management training. These credits helped motivate health professionals, especially pharmacists, to attend training. In all, the ASEP team trained 2,105 service providers. Project surveys indicate that the proportion of caregivers providing STI care rose from 44 to 69 percent one year after training. By 2000, training participants had screened 10,051 customers in pharmacies and clinics.

Policy and advocacy

In 1997 PATH reviewed local policies and environmental factors that impede HIV prevention, and identified numerous constraints—including local ordinances that limited government clinic services to registered "entertainers," clauses in factory-worker agreements that precluded sick leave for STIs, inadequate financial support for HIV and STI prevention, and numerous law-enforcement procedures.

To address these barriers, PATH worked with communities to establish local AIDS councils, reactivate local child-protection councils, advocate with local governments to support HIV- and AIDS-prevention activities, and encourage entertainment establishments to promote condom use. Subsequently, ordinances creating local AIDS councils and mandating basic HIV-prevention policies passed in all eight ASEP cities. In seven of the eight cities, the ordinances also mandated 100-percent condom use in registered establishments.

Next steps

Over the course of this ten-year project, the capacity of national and local government offices, local AIDS councils, private pharmacies, NGOs, and other partners that conduct effective HIV-prevention and surveillance activities was strengthened. In 2000, PATH began transitioning the responsibility for ASEP's educational activities to these groups, who will now build on the project's contributions to maintaining low HIV-prevalence rates throughout the Philippines. ■

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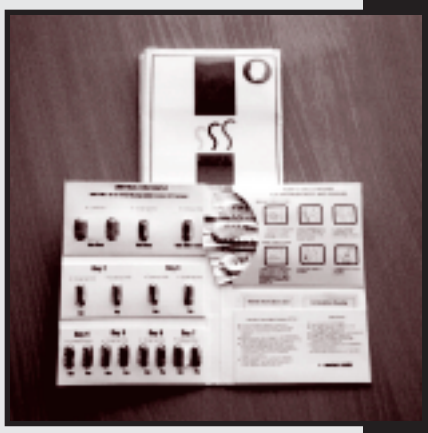
1. Manila Department of Health. *HIV/AIDS Registry* (2003).
2. USAID. *Final Evaluation of the AIDS Surveillance and Education Project (ASEP)*. Manila: USAID (May 14, 2001).
3. *HIV/AIDS Registry: Monthly Update*. Manila: Philippines Department of Health, National Epidemiology Center (June 2003). Available at www.doh.gov.ph/NEC/hivreg_jun2003.pdf.
4. PATH and ASEP Partner NGOs. *2002 Behavioral Monitoring Survey Results and Trend Analysis*. Manila: PATH (December 2002).

PATH has produced several publications documenting ASEP's approach and impact. Copies are available from the "Publications" section of PATH's website (www.path.org).

SOLUTION TO A SECRET SICKNESS



In addition to a lack of information, drug shortages and high drug costs created barriers to STI treatment in the Philippines. To overcome these challenges, PATH developed and marketed treatment packages for STIs with funding from the Dutch Government.

Gender-specific Triple S—"solusyon sa sikretong sakit," or "solution to a secret sickness"—treatment packages contained a seven-day supply of appropriate antibiotics, information about STIs, condoms, and partner-notification cards with referral vouchers. A similar treatment pack, called SafePack, included supplies for syphilis treatment and management of genital ulcers.

PATH used social marketing techniques to develop and distribute the packages. To inform content, packaging, and pricing of the packs, the project team conducted focus-group discussions and in-depth interviews with high-risk groups. For distribution, outreach workers and peers referred clients to pharmacies and NGO clinics where the packs were available and staff had received training in STI management. The team also provided print materials and conducted media campaigns supporting these activities.

To make the packages affordable, PATH developed an innovative pricing structure and negotiated aggressively with local pharmaceutical companies for discounts on antibiotics. In 1998, the first Triple S packs were subsidized by 50 percent. By 2001, PATH had lowered the cost of Triple S components and reduced the subsidy to about 5 percent.

Over the five years of this pilot program, 133 pharmacies and NGOs used Triple S packs to treat about 8,300 STI cases. NGO and government clinics used Safe-Packs to manage 650 cases of syphilis and genital ulcers. ■

PATH PUBLICATIONS: RECENT HIGHLIGHTS

This page features new PATH publications, articles, manuals, newsletters, and fact sheets. For a comprehensive catalog of new materials, please visit the "Publications" section of the PATH website (www.path.org/materials.php). Visitors can download electronic copies of many PATH documents and view a list of new journal articles and book chapters.

Adolescent Health

Bond K, Levack A, Pownall C, Gerber W, Savage W. *Capacity-Building Resources in Youth Sexual and Reproductive Health.* Washington, DC: PATH, NGO Networks for Health, ADRA, CARE, EngenderHealth, PLAN, Save the Children (June 2003).

Hendrix-Jenkins A, Clark S, Gerber W, LeFevre J, Quiroga R. *Games for Adolescent Reproductive Health: An International Handbook.* Washington, DC: PATH (November 2002).

Highlights of 25 Years of Youth Sexual and Reproductive Health Programming. Washington, DC: PATH (2003).

"New Generation" Models for Asia's Youth: Strengthening Networks and Building Capacity. Washington, DC: PATH and NGO Networks for Health (2003).

Gender, Violence, and Rights

Velzeboer M, Ellsberg M, Carcas CC, Garcia-Moreno C. *Violence Against Women: The Health Sector Responds.* Occasional Publication No. 12. Washington, DC: PAHO and WHO, in collaboration with PATH, NORAD, and SIDA (2003).

HIV and AIDS

Aquino C, D'Agnes L, Castro J, Borromeo M, Gill K, Schmidt K. *Best Practices in HIV/AIDS Prevention Education: The AIDS Surveillance and Education Project in the Philippines.* Makati City, Philippines: PATH (August 2003).

Developing Materials on HIV, AIDS and STIs for Low-Literate Audiences: A Guide. Washington, DC: PATH and Family Health International (December 2002).

A Guide to Developing Materials on HIV/AIDS and STIs. Seattle: PATH and Save the Children (December 2003). Developed for the Eurasia region; available in English and Russian.

Maternal Health

Tsu VD, Sutanto A, Vaidya K, Coffey P, Widjaya A. Oxytocin in prefilled Uniject injection devices for managing third-stage labor in Indonesia. *International Journal of Gynecology and Obstetrics.* 83(1): 103-111 (October 2003).

Reproductive Health

Beitz J. *Youth-Friendly Pharmacy Program Implementation Kit: Guidelines and Tools for Implementing a Youth-Friendly Reproductive Health Pharmacy Program.* Seattle: PATH (2003). Available in English and Spanish.

Clark S, Gerber W, Fua I. *Male Circumcision: Current Epidemiological and Field Evidence —Program and Policy Implications for HIV Prevention and Reproductive Health.* Washington, DC: Prepared by PATH for Population Services International, AIDSMark Project (2003).

Elias C, Sherris J. Reproductive and sexual health of older women in developing countries. *British Medical Journal.* 327(7406): 64-65 (July 12, 2003).

Winter 2003 edition of PATH's Reproductive Health Outlook (RHO) website: Now available in English (www.rho.org) and Spanish (www.rhoespanol.org).

Outlook

Ellertson C, Burns M. Re-examining the role of cervical barrier devices. *Outlook.* 20(2) (February 2003).

Finkle C. Ensuring contraceptive supply security. *Outlook.* 20(3) (July 2003).

Kols A. A rights-based approach to reproductive health. *Outlook.* 20(4) (December 2003).

Cervical Cancer

The Alliance for Cervical Cancer Prevention (ACCP) has produced a series of fact sheets and presentations on a range of cervical cancer topics. These materials are available in English, French, and Spanish on the PATH website and the ACCP website (www.alliance-cxca.org).

Technology Solutions

Rapid Diagnostics website: Now available at www.rapid-diagnostics.org.

Vaccines and Immunization

PATH's Children's Vaccine Program (CVP) website has been updated with many new resources, including:

- *Designing Safe Syringe Disposal Systems for Immunization Services: A Guide for Program Managers.*
- *Immunizing Children Against Japanese Encephalitis. Using Inactivated, Mouse-Brain Derived Japanese Encephalitis Vaccine: A Training Module for Vaccinators.*
- *Preventing Vaccine Freezing in the Cold Chain.*

Explore these and other CVP resources at www.childrensvaccine.org.

PATH's Malaria Vaccine Initiative (MVI) has produced several fact sheets including:

- *FMP1 Malaria Vaccine Pediatric Clinical Trial in Kenya.*
- *Malaria Vaccine R&D: A Case for Greater Resources.*

Explore these and other malaria resources at the MVI website (www.malariavaccine.org).

Learn about the Meningitis Vaccine Program, a partnership between the World Health Organization and PATH, at www.meningvax.org.

PATH is an international, nonprofit organization that creates sustainable, culturally relevant solutions that enable communities worldwide to break longstanding cycles of poor health. By collaborating with diverse public- and private-sector partners, we help provide appropriate health technologies and vital strategies that change the way people think and act. Our work improves global health and well-being.

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