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*The research team
observed needles,
intravenous
catheters, and soiled,
foul-smelling band-
ages littering the
floors.*

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September 2002

Volume 8, Number 2

CASE STUDIES

New Book Documents Transformations in Reproductive Health Programs Worldwide

Participants at the 1994 International Conference on Population and Development (ICPD) in Cairo recognized reproductive health as a basic human right and a prerequisite to hastening socioeconomic progress and slowing population growth. This recognition led to the Programme of Action, which called for population programs—previously focused on demographic targets and contraceptive service delivery—to take a client-centered approach to reproductive health and attend to issues of gender, sexuality, and empowerment.

In the eight years since the Programme of Action was issued, how well have reproductive health and population programs addressed its mandates? The Population Council recently published *Responding to Cairo: Case Studies of Changing Practice in Reproductive Health and Family Planning*, a book of 22 case studies documenting this global response. The book, coedited by Population Council researcher Nicole Haberland and consultant Diana Measham, adds a critical new dimension of analysis to the body of material evaluating efforts to promote ICPD goals.

“Policies pronounced on the world stage are only as good as their implementation in the field,” says Haberland. “These case studies show that strides have been made in expanding the scope of reproductive health care. While much remains to be done to realize the Cairo vision, these case studies demonstrate that there are con-

crete, field-level experiments grappling with how to best do so.”

Moving big systems toward a client center

Some of the most widely condemned violations of women’s reproductive rights have taken place in China and India. China instituted its harshly enforced policy of one child per couple in 1979, including strict rules about the type of contraceptive method women must adopt at different stages of their reproductive lives. Economic growth, social change, and international outcry since that time, however, prompted the minister of the State Family Planning Commission to call for a reorientation of the program in 1995. Deqing County was chosen to be the first to experiment with improving quality of care. The county family planning program now focuses on improving client satisfaction and permitting informed choice. Although women are not given a choice about family size, they are informed about a range of contraceptive methods and allowed to select the product they prefer—an explicit departure from the system’s past approach.

For decades, field workers in India’s national family planning program strove to meet government-mandated, stringently enforced quotas for recruiting users of various contraceptive methods—particularly sterilization. They paid little attention to the quality of the care patients

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Improving Provider–Client Interactions in the Philippines

One way to improve the quality of care provided at family planning clinics is to enhance provider–client communication so that clients will be better able to regulate their fertility in a healthful manner. Making services client oriented is the cornerstone of high-quality care and takes little or no extra funding to implement, an important factor in resource-poor settings in the developing world. Most health care providers already receive regular training. Existing classes can be reconfigured to focus on ways of improving interactions with clients.

Client-centered approach

The implementation of a client-centered approach requires that providers and programs shift from a reliance on family planning methods to a focus on client needs. To accomplish this, providers need to discover the clients' desires, particularly women's plans for future childbearing. They should give clients a range of contraceptive methods from which to choose. They need to convey appropriate and accurate information about the selected method. Finally, the provider must assure the client that she can switch to another method at any time.

At a Population Council workshop, program managers and researchers from the Davao del Norte province of the Philippines stated that a large proportion of family planning clients in their region discontinued contraceptive use. They identified inadequate dialogue between clinician and client as a key source of this behavior. Providers often withhold information about side effects, for example, fearing that the knowledge may frighten potential clients. A number of studies from around the world, however, have illuminated the importance of a thorough exchange of information between provider and client. Many have shown that such conversations increase rather than decrease continuation of contraceptive use.

As part of the Population Council's Impact Studies project—which seeks to evaluate the effects of quality-of-care improvements—researchers looked at ways to enhance provider communication skills in the Philippines.

Council researchers assessed the effects of these interventions by comparing experimental with control municipalities.

Davao del Norte province

One study in the Philippines examined clinics from ten matched pairs of municipalities in Davao del Norte province. One locale from each pair was randomly assigned to the experimental group and the other to the control group. Council researchers collaborated with colleagues from AVSC International (now EngenderHealth)

This approach takes little or no extra funding to implement.

to identify strengths and weaknesses in the experimental clinics, particularly those related to provider–client communication.

Eight doctors, 11 nurses, and 38 midwives from the experimental clinics received five days of training following this assessment. Midwives also attended three refresher courses over a three-year period, from 1997 to 1999. Service providers from control clinics did not receive this training. Provider knowledge was assessed both before and after these courses using detailed interviews. No appreciable change was found in the knowledge of providers from the control clinics during the study. On the other hand, the knowledge of providers from the experimental areas concerning side effects and warning signs increased significantly.

The researchers also interviewed 1,728 new contraceptive users—869 from experimental clinics and 859 from control clinics. The researchers evaluated five aspects of quality of care: whether clients' needs were assessed, whether clients were presented with a choice of contraceptive methods, whether they received necessary information about their selected method, whether they were told when to return

to the clinic, and whether they were treated well. Clients who had visited the experimental clinics reported receiving significantly better care than did those who used control clinics. A significantly greater proportion of clients who attended experimental clinics reported receiving complete information.

“Although we did see significant progress after the intervention,” says Population Council researcher Saumya RamaRao, “much room for improvement still exists for all dimensions of quality of care.” Even in the experimental clinics, one-third of patients did not have all their needs assessed, two-thirds did not get full information, three-fifths reported not being treated well, and nine-tenths were not well informed about follow-up services.

In a companion study the researchers trained 110 outreach workers in two of the experimental municipalities to use a series of questions to elicit clients' reproductive health needs. Needed services were then offered in the home or clients were referred to a clinic. The trained outreach workers contacted 6,173 married women living in the municipalities and assigned priorities for subsequent follow-up visits.

“This project demonstrates the feasibility of enhancing providers' information-dispensing capabilities within the confines of existing resources,” says Anrudh Jain, senior director of policy and regional programs at the Population Council. During the next phase of the study, researchers will follow up with clients after one and two years to determine contraceptive continuation rates. ■

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OUTSIDE FUNDING

The Rockefeller Foundation and the United States Agency for International Development

Maternal Deaths in the Dominican Republic Analyzed

In the Dominican Republic, 94 percent of women obtain prenatal care and 97 percent deliver in hospitals, conditions that generally bode well for maternal health. Why then, researchers asked, is the country's maternal mortality rate so high, estimated at as many as 229 deaths per 100,000 live births? In the United States, the rate is 7.7 deaths per 100,000 live births.

After forming a multidisciplinary assessment team and analyzing the country's national reproductive health care program, Population Council researchers and colleagues in the Dominican Republic identified the answer: a lack of high-quality care in maternity wards.

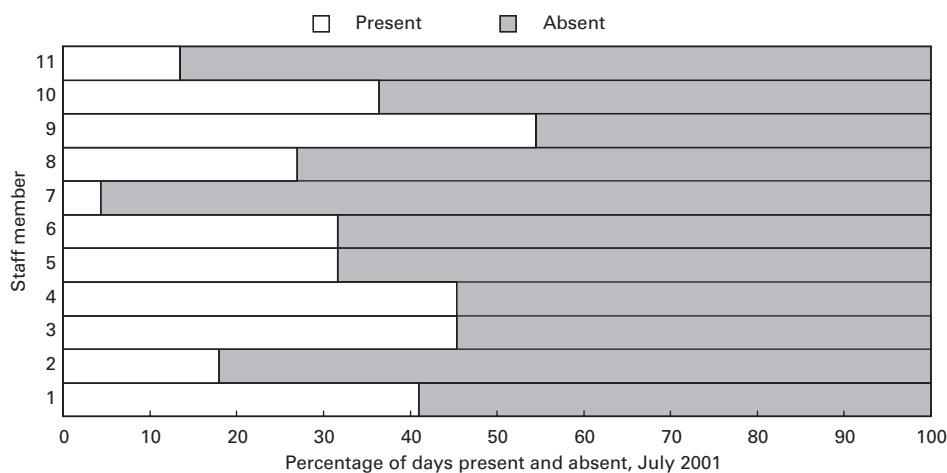
Filthy, understaffed labor wards

According to the researchers' recently published report, labor wards were crowded and dirty. In the labor ward of one of the country's two main maternity hospitals, the team observed needles, intravenous catheters, and soiled, foul-smelling bandages littering the floors. Body fluids were also found in beds and on floors. Trash overflowed waste receptacles. Complicated births were not given necessary attention and normal cases were overmedicalized (all women were given episiotomies, for example). In many hospitals, overcrowded conditions and a lack of adequately trained attendants contributed to a higher rate of maternal death.

The study—sponsored by the United States Agency for International Development, the Population Council, and the Dominican Republic's Ministry of Health and Social Welfare—was designed to identify strengths, prioritize solutions to problems, and work with community, governmental, and nongovernmental representatives to improve reproductive health care.

The investigation revealed that lower-level regional institutions, although often clean and well managed, were not prepared to handle high-risk pregnancies; complicated

Individual attendance records of general and specialized medical staff at municipal hospitals



deliveries requiring anesthesia or blood transfusions were referred to higher-level institutions. Yet the national program lacked a formal plan to transport women from one facility to another. Although a few institutions used ambulances, in most cases women were forced to rely on public transportation or private vehicles.

Lack of trained attendants

Physicians in lower-level regional institutions often failed to appear for work; thus untrained nurses in these hospitals would either send all women to the referral hospitals or attempt to conduct deliveries themselves, receiving only telephone instructions from physicians.

At the larger hospitals, researchers discovered crowded conditions and a lack of adequately trained attendants. For example, in one hour of observation at a higher-level hospital, the research team witnessed 12 births. During that time the most experienced person in the delivery ward was a first-year resident with five months of service. The other eight providers were interns, medical students, and nurses.

"In promoting safe motherhood, the conventional wisdom is that if you get the women to the hospital, you will save lives," noted the study's lead investigator, Suellen Miller,

Population Council senior consulting associate. "In the Dominican Republic, women were doing what they were supposed to be doing to ensure a safe birth: they were going to hospitals for delivery. The physicians were the ones who failed to follow the established norms for quality care, resulting in a high rate of maternal death."

The team made a number of recommendations for improving the situation, including enforcing attendance by physicians and other staff and adherence to accepted protocols and punishing noncompliance, so that women can safely seek care at community-level institutions rather than higher-level institutions. The findings of this report have prompted Dominican health officials to suspend offending physicians and implement other measures to decrease maternal mortality. The report can be downloaded in PDF format at: http://www.popcouncil.org/pdfs/dr_strat_assessment.pdf ■

SOURCE

Miller, Suellen, Argelia Tejada et al. 2002. "Strategic assessment of reproductive health in the Dominican Republic." Research summary of the Expanding Contraceptive Choice project. New York: USAID, SESPAS, and Population Council.

OUTSIDE FUNDING

United States Agency for International Development/Dominican Republic Mission

Altering Cell Bonds in Testis May Yield Contraceptive

The development of effective, reversible, and safe contraceptives for men has lagged far behind the availability of methods for women, largely because scientists lack sufficient knowledge about male reproductive physiology. Improving this state of affairs has been a key aim of scientists at the Population Council's Center for Biomedical Research. In one of the Council's labs, biochemist and cell biologist C. Yan Cheng and his colleagues have made significant progress in understanding a process that is essential to the formation and development of sperm. Drawing on this knowledge, the team is developing compounds that may eventually be used as new male contraceptive methods. If successful, the methods would induce reversible infertility without interfering with hormones secreted by the hypothalamus, pituitary gland, and testis.

"The hormones of the hypothalamus-pituitary-testicular axis regulate male sex drive and maintain the health of other targets, including bone, muscle mass, and the sex organs. Male contraceptives that bypass this hormonal system would be welcome because they would be likely to leave these organs and libido intact," says Régine Sitruk-Ware, executive director of contraceptive development at the Center for Biomedical Research.

Germ-cell migration

Cheng's strategies target the movement of germ cells, a critical component of sperm development. Germ cells mature into sperm as they travel from the outer layer of seminiferous tubules to the cavity at the center of the tubules. This migration is facilitated by the constant disruption and regeneration of specialized attachments between cells within the testis.

Cheng was first put on the trail of one compound, AF-2364, through the work of a colleague, Professor Bruno Silvestrini at the University of Rome, who was studying an anti-cancer drug, lonidamine. One side effect of lonidamine was a temporary, profound disruption of spermatogenesis. Because of its toxic

side effects, lonidamine could not be used as a contraceptive. However, Cheng speculated that if he could synthesize nontoxic analogs of lonidamine, they might work as a male contraceptive. AF-2364 is one such analog.

The compound interferes with the adhesion of germ cells to the supportive Sertoli cells that surround them. When this attachment is disrupted, germ cells are released before they mature and become capable of fertilizing an egg. Cheng's research has shown AF-2364 to be a potent, effective, and reversible male contraceptive in laboratory animals. Normal fertility

If successful, the methods would induce reversible infertility without interfering with hormones.

returns a few months after treatment with AF-2364 stops. The compound does not influence the hypothalamus-pituitary-testicular axis. Tests in animals and cell cultures indicate that it is not toxic to the liver, kidney, or other organs and does not cause genetic mutations. Studies to determine whether AF-2364 is toxic to the cardiovascular, respiratory, or central nervous systems are underway. Tests to establish whether the compound is toxic when given in low doses over a long period of time are scheduled to begin in late 2002.

"Once these studies are successfully completed, we will be able to apply for Investigational New Drug status for the compound," says Dolores Mruk, research investigator in Cheng's laboratory. "Phase 1 clinical trials in humans may begin after that."

Sertoli cells release multiple substances that allow the normal functioning of germ

cells in the testis. They also create the blood-testis barrier by tightly adhering to each other near the periphery of the testis. This blockade prevents immune system cells from entering and attacking sperm.

Primitive germ cells must migrate past the blood-testis barrier in order to mature. Thus, the barrier must open and close periodically. A number of protein molecules preside over the disassembly and reassembly of the blood-testis barrier that occur during germ cell migration. One of these proteins is occludin. Cheng and his colleagues have recently developed a compound that attaches to occludin and holds the blood-testis barrier open for longer than normal. This allows cells from the immune system to gain access to developing sperm. In laboratory animals receiving this compound, immune cells destroyed immature sperm, temporarily causing infertility. Normal fertility returned in less than two months after treatment was stopped.

"These results show that a class of male contraceptives with potentially few side effects can be developed by interfering with cell-to-cell attachments in the testis," says Cheng. ■

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OUTSIDE FUNDING

The CONRAD Program, the Hong Kong Research Grant Council, the National Institutes of Health, the Noopolis Foundation, and the Rockefeller Foundation

Friends Strongly Influence Contraceptive Use in Ghana

Population Council researchers are exploring the theory that behaviors related to contraceptive practices can be contagious. Like viruses, ideas and practices vary in their “infectiousness.” Under the right circumstances, people may adopt certain attitudes and behaviors after exposure to only one or two people exhibiting them. Other ideas and behaviors may be much less infectious. Although it may seem obvious that people’s reproductive behaviors are influenced by those of their peers, few researchers have investigated the magnitude of these social effects. Population Council researchers John B. Casterline, Mark R. Montgomery, and Paul C. Hewett collaborated with scientists at the University of Cape Coast in southern Ghana and other Council investigators to explore contraceptive use as a form of social contagion. They recently published their first analysis of data from this study.

Innovative behaviors

Social diffusion—the influence exerted by one person’s knowledge, attitudes, and behaviors on the practices adopted by others—is most powerful when behaviors are innovative, theorize the researchers. In these instances, people have incomplete knowledge about the risks and benefits of new practices and may rely more heavily on the ideas and experiences of their peers. In West Africa, use of modern contraceptives is rare—19 percent of women rely on modern contraceptives in the area in which the study took place—and thus may be strongly influenced by diffusion effects.

The researchers selected six communities in southern Ghana that are isolated from each other and that provide diversity in ecological setting, economic activity, ethnicity, and kinship systems. They conducted baseline interviews in 1998 of women who were aged 18 through 50, irrespective of marital status, along with the male partners of those women in formal unions. Four out of six rounds of collected data have been analyzed. The present analysis deals with the 881 married women who were interviewed and not pregnant during

all four rounds, resulting in 15,024 woman-months of observation. (The researchers did not include pregnant women because such women would not be using contraception, which was the behavior they wanted to study.)

“In addition to interviewing study participants in detail about their social networks, we asked about their exposure to mass media, their geographic mobility, and their contact with health and family planning workers. We also noted other likely determinants of contraceptive practice, such as schooling of the

“A woman only needs to have one friend who approves of or uses family planning to significantly increase her own chances of doing so.”

respondent and her husband,” says Montgomery. “Thus, we can tease out the relative effects of all these variables.”

With respect to their social networks, women were queried about people other than their husband or partner whose opinions are important to them. They were also asked about friends and associates with whom they discuss modern contraception. Interviewers recorded all the names that the respondents volunteered. Extensive information was then gathered about the first four persons named, particularly information about fertility and contraception, such as whether the respondent felt that her associate approved of modern contraception or had used modern contraception. Each respondent was also asked whether she and her close associates had ever encouraged

or discouraged each other from using modern contraception.

Social diffusion

Controlling for other variables, including the desire to avoid pregnancy, the results indicate that women’s adoption of modern contraception is a highly infectious behavior. “When a woman believes it would be in her best interest to regulate her fertility, she only needs to have one friend who approves of or uses family planning to significantly increase her own chances of doing so. This social contagion is very powerful,” says Casterline. The added effect of each network associate beyond one is small and not statistically significant.

In addition, the researchers found that the association between fertility and the schooling of either the husband or wife—a link that is strong in many areas of the world—is weak in this region. “Approval or use of family planning does not seem to be influenced by exposure to the media or travel to urban areas either,” says Hewett. In contrast, receiving encouraging advice from a health or family planning worker is strongly associated with use of modern contraception.

This research has important implications for the design and evaluation of health and family planning programs. Social diffusion processes can act as “social multipliers” that amplify the influence of any given intervention. Programs that are designed to capitalize on diffusion effects can therefore have a larger influence. Further, scientific evaluations of program influence will not give programs enough credit for social change if the social multiplier effect is not taken into account. ■

SOURCE

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OUTSIDE FUNDING

The William and Flora Hewlett Foundation, the Andrew W. Mellon Foundation, the National Institute of Child Health and Human Development, and the Rockefeller Foundation

Demographic Change and Regional Affiliations in East Asia

Many political scientists and international economists imagine a world future in which there are three dominant regional blocs: the European Union, a Western Hemisphere grouping centered on the United States, and East Asia. The North American Free Trade Association (NAFTA) is a move toward Western Hemisphere regionalization. Various similar efforts at regional integration have been attempted in East Asia.

Although most research on regionalization lies within political science, significant demographic influences on the process warrant examination. Recently, Population Council demographer Geoffrey McNicoll explored these influences in the East Asian case—examining how population change is affecting the emergence of Asian regional affiliations and identities, from simple trade pacts to deeper levels of economic and even cultural integration.

Regional leadership: China and Japan

Stable regional affiliations can evolve among a group of countries with roughly comparable size and technology, as happened in Europe or the subregion of Southeast Asia. They can also evolve where one country is an uncontested dominant power, as in South Asia or (in a plausible future) the Western Hemisphere. The region of East Asia—from Japan to Myanmar—is not like either of these situations: it has two major powers, Japan and China. This feature, notes McNicoll, “makes for a distinctive structural problem in regional architecture.”

China and Japan are on vastly different economic and demographic trajectories. China’s economy is burgeoning; Japan’s is stagnant. A shift in regional leadership is already anticipated: according to prominent Japanese management guru Kenichi Ohmae, “In the future, Japan will be to China what Canada is to the United States, what Austria is to Germany, what Ireland is to Britain.”

Demographic contrasts play an important role in this changing perspective. The differ-

ence in age structure is the most obvious of these. China is about 30 years behind Japan in the proportions of the population over age 60. Currently 10 percent of the population in China is over 60, compared with 23 percent and steeply rising in Japan. But although Japan has a larger immediate problem in confronting population aging, it is also institutionally far better equipped to deal with this situation than is China.

Japan, moreover, does not have to deal simultaneously with rural-to-urban migration:

The special characteristic of East Asia is the presence of two economic heavyweights.

it is fully urbanized. China, in contrast, will likely have to absorb hundreds of millions of rural migrants into its cities over the next several decades—a daunting prospect should the country’s economic growth falter.

Migration and regionalization

By world standards, there is strikingly little migration between the countries of East Asia. Japan, an obvious target for economic migrants, has less than one percent foreign-born in its population. But absence of migration need not be a mark of weak economic ties. In fact, migration is a highly inefficient process of linking economies, says McNicoll. It is much more practical to move management and technology abroad than to import labor.

Prospects seem to be scant that any East Asian version of the common labor market of the European Union will appear. Even in North America, the evolution of NAFTA into a common market is firmly resisted. Paradoxically, he

notes, the prerequisite for such an agreement is the likelihood that any permanent migration under it would be minimal. At most, some subgroup of East Asian states might negotiate mutual labor market access for their citizens.

Economic vs. cultural bases for regional integration

Expectations about East Asia’s economic future used to draw on the image of flying geese, with Japan always in the technological lead but steadily shifting more labor-intensive industries to other, lower-wage economies in the region—the trailing geese in the flight. Economic geographers have such a picture in mind when they describe emerging networks of cities—a hierarchy with Tokyo as the region’s “global city,” followed by Singapore, Seoul, and Taipei, also with “command and control” roles, then the large manufacturing centers like Shanghai and Bangkok. All of these are located in a vast urban corridor stretching from Yokohama, Japan to Surabaya, Indonesia, drawing together most of the region’s economies.

The impetus for development along these lines still exists, but McNicoll also lends credence to a competing principle of regional organization, deriving from the Chinese ascendancy. A China-led regionalization may evolve, incorporating Taiwan, Hong Kong, Singapore, and to some degree other Southeast Asian countries in which Chinese-owned firms play a dominant role. “The demographic dimensions of regional change will be a significant factor in determining whether economy or culture emerges as the dominant principle of regional organization—a choice with profound implications for East Asia’s political landscape,” McNicoll concludes.

SOURCE

McNicoll, Geoffrey. 2002. “Demographic factors in East Asian regional integration.” Policy Research Division Working Paper no. 158. New York: Population Council.

OUTSIDE FUNDING

Japan Foundation Center for Global Partnership

continued from page 1

received, or to patients' needs for other reproductive health services. In 1996, official policy in India became more client centered, focusing on the delivery of comprehensive, high-quality services. Importantly, health workers—rather than government bureaucrats—were asked to determine the health care and family planning goals of the communities in which they worked.

Case studies in three districts in southern India showed that experiences implementing the new approach have varied. Nevertheless, a number of common lessons can be drawn. For example, while health workers show greater commitment to goals that they set for themselves, the policy changes have greatly increased their workload. While they have taken their new responsibility seriously, in some settings their new service delivery goals have been supplanted by mandates from mid-level supervisors. And although many women are receiving higher-quality care, in some cases health workers still assign contraceptive methods without taking women's preferences into account.

"Changes take time; they don't happen overnight. But these improvements bode well for the future of family planning programs in China and India," state the editors.

Targeting gender violence

Gender-based violence is endemic in many countries. In addition to its direct physical and emotional consequences, it influences women's reproductive health, for example, by impinging on their ability to use contraceptives and avoid sexually transmitted infections. The casebook describes programs in two countries, Tanzania and Venezuela, that took different approaches toward addressing this issue.

In Venezuela, a family planning organization, the Asociación Civil de Planificación Familiar (PLAFAM), began to screen for gender violence among its clients with the goal of supporting women who had experienced abuse. PLAFAM began its program by increasing staff awareness, training clinicians, hiring psychologists, developing educational materials, and obtaining information about supportive agen-

cies. PLAFAM also collaborated with other community groups to lobby successfully for Venezuela's first legislation, passed in 1999, outlawing both violence against women and violence within families.

The book also documents community-level strategies to reduce gender-based violence. In Tanzania, the organization Jijenge! attempted to change how an entire community regards women and to replace norms that perpetuate violence against them.

Jijenge! began by working with male and female community leaders to form a volunteer community-interest group to guide the antiviolence intervention. Jijenge! also conducted in-depth interviews and focus-group discussions to determine community attitudes about domestic violence. On the basis of evidence gleaned from this research, group members developed several community-awareness activities, including community theater, story booklets, murals, and radio programs. In addition, neighborhood watch groups were formed to intervene more actively in the cycle of violence.

Although it is difficult to measure change in gender-based violence, anecdotal evidence points toward the success of Jijenge! According to community leaders, there has been an observable shift in people's willingness to intervene when they witness violence. "Women's health advocates, armed with compelling data, have called attention to the deleterious effects of gender violence on reproductive health," says Measham. "Cairo helped to cement its place on the agenda's challenges. These are two excellent examples of how this concern is now being addressed at the project level."

Strength in numbers

In addition to documenting the field-level effects of policy reform and efforts to reorient service provision, the casebook profiles efforts to address the social and economic underpinnings of women's reproductive ill health. Organizations in Nepal and Peru, for example, sought to empower women through group formation. Women were given the opportunity to identify

the reproductive health and gender concerns most important to themselves and their communities and to begin to address these concerns in ways that clinic-based services cannot.

In Peru, women participated in weeklong diagnostic exercises arranged by the Movimiento Manuela Ramos's USAID-financed *ReproSalud* project. They identified reproductive tract infections (RTIs) as their reproductive health priority. Program managers had expected unplanned pregnancy, maternal mortality, and other issues to top the list. In response, an RTI prevalence survey was undertaken to facilitate advocacy efforts with local authorities. The project also provided the women with intensive training. Given their difficulty in negotiating safe sex and seeking reproductive health care, partner communication and negotiation skills were emphasized.

In Nepal, the Boudha-Bahunipati Family Welfare project addressed reproductive health concerns both by enhancing clinic-based reproductive health care and by forming and supporting women's savings and credit groups. Trained staff helped group members explore and prioritize their reproductive health concerns. Two years after the project began, measurable effects were found in the use of a range of reproductive health services.

The programs and interventions detailed in this volume represent a rich body of experience that can help to provide direction, fresh ideas, and cautions as the field moves forward. "Many of these efforts are at the vanguard of change. Replicating and scaling up the approaches they embody is the key to meeting Cairo's goals," the editors conclude.

For more information or to order the book, visit the Population Council Web site <http://www.popcouncil.org/cairocasestudies/index.html> ■

SOURCE

Haberland, Nicole and Diana Measham (eds.). 2002. *Responding to Cairo: Case Studies of Changing Practice in Reproductive Health and Family Planning*. New York: Population Council.

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September 2002 Vol. 8, No. 2

Population Briefs is a research newsletter of the Population Council. The Council is an international, nonprofit, non-governmental organization that seeks to improve the well-being and reproductive health of current and future generations around the world and to help achieve a humane, equitable, and sustainable balance between people and resources. The Council conducts biomedical, social science, and public health research and helps build research capacities in developing countries. Established in 1952, the Council is governed by an international board of trustees. Its New York headquarters supports a global network of regional and country offices.

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ISSN 1084-6786

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Printed in the USA on recycled paper

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