

PRB

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FROM RESEARCH TO ACTION:

**How  
Operations  
Research Is  
Improving  
Reproductive  
Health  
Services**

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Kate Chakley**

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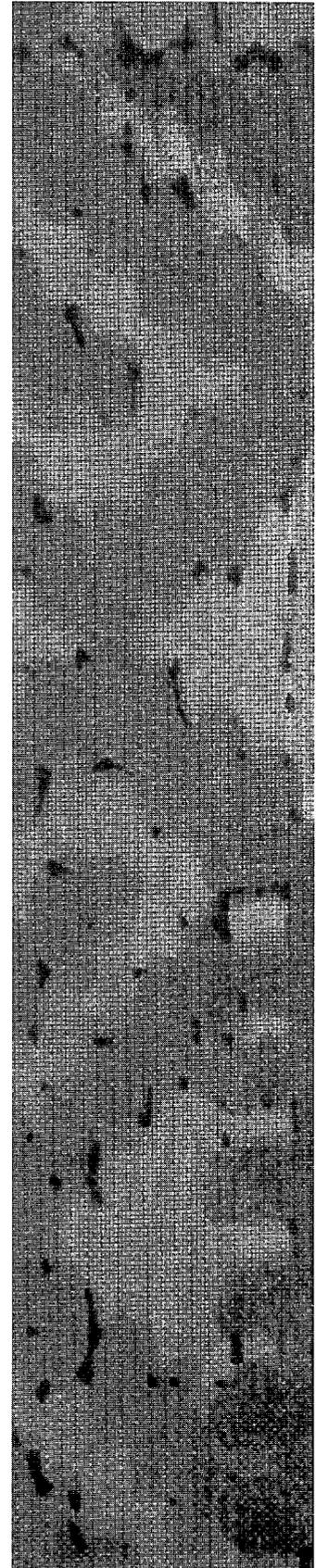
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## Summary

Operations research (OR), as applied to family planning and related reproductive health programs, is a problem-solving tool used to find practical solutions to service delivery problems. Initially introduced to design and test new strategies for delivering family planning services in developing countries, OR has evolved to meet the changing needs of programs and managers in their efforts to improve the health of women and children. In addition to helping program managers and policy-makers improve existing family planning services, OR is testing innovative approaches to providing a range of reproductive health services, as recommended by the 1994 International Conference on Population and Development (ICPD).

Operations research is improving family planning and other reproductive health services in several areas:

- **Quality of care.** The overall quality of services includes elements of care ranging from the interpersonal to the technical and affects whether clients are satisfied and will continue to use services. Operations research reveals clients' perspectives on their care, thus enabling program managers and service providers to understand the factors that affect both delivery and receipt of services. In many countries, OR studies have found that providers' attitudes and beliefs affect quality of care and influence a client's choice of contraceptive method. When providers are retrained, client satisfaction improves, as does the continued use of their chosen contraceptive method.
- **Outreach to special populations.** Special efforts are needed to reach certain underserved groups, including young adults, men, and rural and indigenous groups. In Latin America and Africa, family life education courses have increased knowledge and use of family planning among young people. Worldwide, studies show that working through traditionally male organizations and training male leaders in a gender sensitive manner are effective strategies for reaching men. In Africa and Asia, specially trained paraprofessionals and community members have provided information and services to rural and indigenous groups.
- **Integration of reproductive health services.** Integrating family planning and other reproductive health services has received increased attention since the 1994 ICPD. Operations research provides useful





information about service integration in different settings. Studies in Haiti and Honduras show that providing family planning services along with postpartum care is popular and effective, even for women who deliver at home. Groundbreaking studies in Egypt, Mexico, and Kenya have demonstrated the demand for and cost-effectiveness of quality postabortion services that include family planning. Studies in Uganda, Kenya, Botswana, and India show that integrating sexually transmitted infection services with family planning is feasible, but requires changes in provider attitudes, training, and policies.

■ **Sustainability.** As the demand for family planning and other reproductive health services grows, program managers and policy-makers are striving to make the best use of limited government and donor resources. Several OR studies show that programs can become more efficient by eliminating unnecessary procedures and making better use of staff—without sacrificing quality of care. Studies also find that clients and private sector businesses are willing to pay for family planning services, but how much they are willing to pay remains to be tested.

Operations research will continue to test the feasibility of integrating services; to improve service quality and access; to enhance sustainability; and to investigate new interventions, such as strategies for providing emergency contraception or eliminating female genital mutilation. In addition to finding answers to specific service delivery problems, researchers and program managers are being challenged to improve the application of OR results. More emphasis is also being placed on developing local capacity in operations research. The more that researchers and program managers collaborate to find and test solutions to service delivery challenges, the more their research can be effectively put into action.



## Introduction

A woman in Morocco receiving family planning services in her home and a woman in the Philippines having an intrauterine device (IUD) inserted by a nurse in her local health clinic can both thank operations research (OR) for these innovations in service delivery. Since the 1960s, when OR first emerged on the international development scene as a method of improving the delivery of health services, millions of family planning and reproductive health clients in Asia, Africa, and Latin America have benefited. Many of these changes are now familiar and vital components of family planning and other reproductive health services worldwide.

This booklet explores the contributions of operations research funded by the United States Agency for International Development (USAID) to improving family planning and other reproductive health services, with a focus on lessons learned since the late 1980s.\* It is not meant to be an exhaustive analysis of OR studies, which also cover related topics such as maternal health, AIDS, and primary health care, and which are too numerous to catalog here.\*\* Rather, these selected findings highlight results from recent studies on the delivery of family planning and other reproductive health services and demonstrate the global applicability of OR. (More detailed information can be found in the study reports listed as references.) The majority of the findings demonstrate ways to improve family planning services; however, some recent results from studies in other areas of reproductive health are also included.

### What is operations research?

Operations research is a problem-solving tool used to improve the accessibility, availability, and quality of family planning and other reproductive health services.<sup>1</sup> OR focuses on both policies and day-to-day operations of programs. It includes pilot projects to demonstrate new approaches; studies to diagnose and correct service delivery problems; and experiments to test the impact and cost-effectiveness of different solutions. By allowing program managers to try new strategies and approaches, OR encourages low-cost experimentation in service delivery.

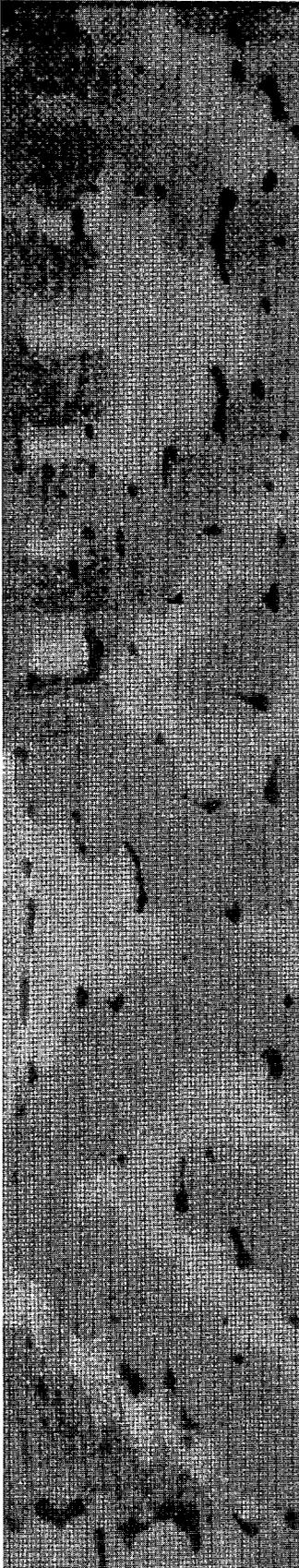
\*For more information about earlier operations research see Population Reports, *Operations Research: Lessons for Policy and Programs*, Series J, no. 31, May-June 1986 (Baltimore, Maryland: Population Information Program, The Johns Hopkins University); and M. Seidman and M. Horn, *Operations Research: Helping Family Planning Programs Work Better* (New York: Wiley-Liss, 1991).

\*\*For a listing of OR studies, see POPLINE database, keyword "Operations Research," available from Johns Hopkins University (online) [URL: <http://www.jhuccp.org/popwel.stm>].



**"OPERATIONS  
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PARTICIPATION OF  
PROGRAM STAFF  
IN THIS PROCESS  
IS ESSENTIAL."<sup>1,2</sup>**

**Operations research  
expert, United States**



OR differs from other types of research in that those who can use and benefit from the information are involved from the start. The active participation of program managers and policy-makers from the identification of a problem through its resolution ensures the usefulness of the research. One of the hallmarks of OR is that it turns research into action: studies are designed to address specific service delivery problems, and actions are taken as a result of the research findings.

### **What are the steps in the operations research process?**

OR is a continuous process of identifying and solving program problems. There are five basic steps in the OR process.<sup>3</sup>

1. Assessing service delivery: Identifying and defining the problem.
2. Selecting a service delivery intervention.
3. Testing and evaluating the intervention.
4. Disseminating research results.
5. Applying research results.

The last step, applying research results to a program, can lead directly back to the first. Assessing the programmatic impact of the intervention can give rise to new topics for study, thus continuing the process of program improvement.

### **Why do operations research?**

The environment in which family planning and other reproductive health services operate is constantly changing. In order to adapt and improve programs to meet clients' needs, managers need to know how their programs are functioning. Different types of OR studies can address this need. For example, exploratory/diagnostic studies provide information about the functioning of services, and the users of these services. Exploratory/diagnostic studies also help managers understand and define problems. Field intervention studies test solutions to service delivery problems. For example, an intervention study can test whether integrating family planning services with child vaccination services is cost-effective and will increase use of family planning. Evaluative studies provide information about the impact of activities and feedback on the effect of a change in service delivery.<sup>4</sup>

## Evolution of Operations Research

Operations research has evolved along with family planning and other reproductive health programs. As demand for services has increased, OR has been instrumental in finding and testing new strategies for reaching more users. OR is credited with “demedicalizing” family planning and opening the many new community and commercial channels for delivering family planning services that we take for granted today. OR responds to the challenges of programs at various stages of development throughout the world. One research methodology developed by OR, situation analysis, is now widely used to provide comprehensive information about the quality and functioning of service delivery systems.

*(For more information about situation analysis, see p. 6.)*

### Reaching more users

Given the demand for and variety of family planning services that exist today, it is surprising that family planning services were little known and rarely available in most developing countries just 30 years ago. Early OR studies, such as those conducted in Taiwan, demonstrated the significant demand for family planning.<sup>5</sup> It is now common-place to see a variety of health personnel providing family planning services, but before the late 1960s only physicians provided these services. A groundbreaking OR study of nurse-midwives in Thailand helped open the door to other providers.<sup>6</sup> Additional studies in the 1970s demonstrated that specially trained health personnel could competently insert IUDs and perform voluntary female sterilizations. Given the limited number and geographic availability of physicians in developing countries, the use of non-physicians to provide family planning services has greatly expanded service delivery.

In the 1970s, OR also evaluated the impact of bringing family planning to the people. Pilot projects in Egypt, Morocco, Tunisia, and Bangladesh used specially trained workers to deliver family planning information and supplies through home visits and community depots. The projects showed that this type of outreach—called community-based distribution (CBD)—could significantly increase contraceptive use.<sup>7</sup> CBD is acknowledged to be one of the most important contributions of operations research.

### Operations research as a problem-solving process

A valuable aspect of operations research, according to experts, is that it gets program managers involved in problem solving. Managers who use OR have come to depend on the collection and use of qualitative and quantitative information in their daily managerial role. OR has been institutionalized in some organizations, and program managers are closely involved in the research process *(see box, next page)*.

“IF THE MANAGER  
IS NOT INTERESTED  
IN THE QUESTION, IT  
IS NOT LIKELY S/HE  
WILL BE INTERESTED  
IN THE ANSWER  
EITHER.”<sup>18</sup>

Management expert,  
United States

OR allows program managers to take risks. Because OR pilot projects test innovative solutions on a small scale, they protect programs against large-scale, potentially damaging and costly failures. Pilot projects also highlight the possible national or regional impact of successful interventions. For example, many national CBD programs began as pilot projects. Similarly, OR has enabled program managers to introduce family planning under the umbrella of research in politically difficult environments, such as West Africa in the 1980s. Once a pilot project succeeds, policy-makers are more interested in fostering its application and expansion.

## **Regional differences in the use of operations research**

Family planning programs have developed at different paces in Asia, Latin America, and Africa. The challenges these programs present vary, as does the way OR can meet these challenges. New programs require diagnostic studies, demonstrations of effective service delivery systems, and intense technical assistance. Established and growing programs more often need to solve problems and make incremental improvements in service delivery. For example, in Latin America and Asia, OR has successfully tested different service delivery strategies and analyzed their cost-effectiveness. In Asia, OR is used increasingly to change

national policies. In sub-Saharan Africa, where services are limited and contraceptive use is low, OR has been most effective at introducing innovative strategies for delivering family planning services.<sup>9</sup>

## **New research methodology: situation analysis**

In addition to testing ways for improving services, OR also contributes new methods of research. One such method—situation analysis—is a systematic data collection tool that provides a comprehensive view of services.<sup>10</sup> During situation analysis, researchers visit a representative sample of family planning service delivery points. They inventory the facilities and services provided, observe interactions between clients and providers, and interview staff as well as clients after they have received services.

Situation analysis has been used to assess service quality, measure the integration of family planning with other reproductive health services, estimate staff training needs, design new program interventions, identify areas for further research, and provide data for changes in policy and resource allocation. Follow-up situation analyses have been conducted in several countries, allowing decision-makers to assess progress in quality improvement. Since its development by the Population Council in 1989 for use in sub-Saharan Africa, situation analysis has been used in three dozen countries worldwide.

### **Bridging the Gap Between Research and Programs: The Health Research Unit of the Ghana Ministry of Health**

"Too often, research is confined to the academic arena and rarely finds its way into services, policies, and programs," says Dr. Sam Adjei, director of the Health Research Unit of the Ghana Ministry of Health. In an effort to bridge the gap between research and programs, the Health Research Unit was created in 1990. Its goal is to improve health services by translating research results into policies.

The unit planned to focus on articulating the research needs of the Ministry of Health to all groups involved in research, and to publicize research results. However, it soon discovered that program managers in the field lacked an understanding of the need for and use of research. In response, the unit trained teams of doctors, nurses, and health educators in each of Ghana's ten regions to identify service delivery problems, develop research proposals, conduct field work, and analyze results. These regional managers and service providers are now important links among research, programs, and policies.

"We have demystified the research process," says Dr. Adjei. "Managers now understand that research has a positive and useful role in service delivery." It is now routine for district and regional managers to define research problems and develop research proposals, some of which have had national impact. For example, results from quality of care studies in health and family planning are being incorporated into Ghana's agenda for national health sector reform. Because the Health Research Unit has so successfully decentralized the research process, it is now working to ensure that research results are communicated throughout the country, from district to regional to national levels.<sup>11</sup>



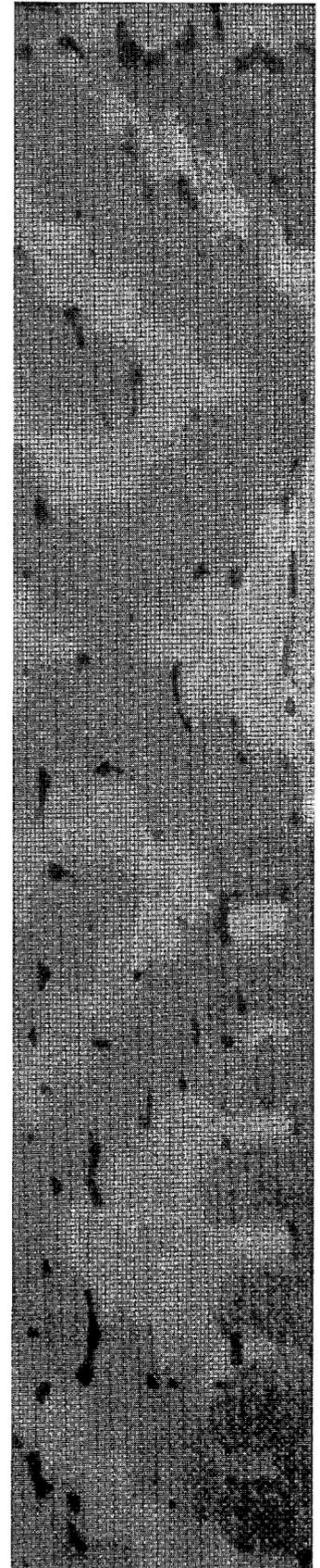
## **What Has Operations Research Taught Us?**

### **Improving Quality of Care**

The quality of family planning and other reproductive health services affects whether clients decide to use contraception and continue to use services. If clients are not satisfied with the care they receive, they are less likely to return. Operations research helps define quality services and determine what aspects of quality are most important to clients and providers. Information on a range of elements, including choice of family planning method, interpersonal relations and information exchange between clients and providers, technical competence of providers, and mechanisms to ensure continuity, provides program managers with valuable information to evaluate and improve the quality of services.

Clients are good judges of interpersonal care, and greater use of qualitative research techniques, such as in-depth interviews, focus groups, and simulated clients, has given program managers information about clients' perspectives on the care they receive. OR continues to focus on client-provider interactions and to determine how best to respond to the needs of users. OR is also exploring the dynamics of family planning method use, including how to reduce discontinuation rates, effectively introduce new methods, expand the method mix, and better understand method switching.

In most programs, supervisors are responsible for overseeing the technical aspects of providing quality care. OR is studying the effect of training on quality of care, and testing ways to improve the efficiency and effectiveness of supervision.



## Method Choice and Interpersonal Relations

### Challenge

Satisfying a client's reproductive health needs and finding a family planning method that is acceptable and appropriate is a complex process. While past research has shown that expanding the choice of available contraceptive methods increases contraceptive use and improves continuation of use, less is known about the factors that determine what method a client adopts.<sup>12</sup>

### Findings

#### 1. Providers' preferences and beliefs influence choice of a method.

A study in Jamaica found that many private providers of family planning services were limiting clients' choices of contraceptive methods according to their personal biases.<sup>13</sup> As a result, the care and method a client received varied according to the provider's beliefs and preferences. A continuing education series was developed to improve private providers' knowledge of current scientific information on contraceptive methods and to increase use of national standards for service delivery. Contraceptive updates for providers are now offered in many countries.

A situation analysis in Pakistan found that although the majority of clients received the contraceptive method they wanted, only 57 percent said service providers discussed methods other than the one the client actually accepted.<sup>14</sup> This finding suggests that some service providers present a variety of methods to clients, while others are more directive. As a result, training and supervision of providers in Pakistan's Family Welfare Centres have been strengthened to ensure that all clients are presented with a range of methods.

#### 2. Methods given low priority by providers and program managers are often underused by clients.

In Kenya, program managers noted a large decline in the use of IUDs over a 10-year period.<sup>15</sup> Qualitative research revealed that the decrease in IUD acceptance was related to inaccurate information given to clients, provider fear of contracting human immunodeficiency virus (HIV) from clients, provider bias, negative rumors about IUDs, and shifting client preferences. A similar study in India found that few couples used reversible family planning methods because they knew little about these methods and their benefits.<sup>16</sup> Program managers did not promote reversible methods, so field workers spent little time talking about these methods with clients.

A study in Madagascar tested an effort to improve the provision of IUDs.<sup>17</sup> When staff training was strengthened and additional equipment and supplies were provided, IUD use increased dramatically in the two test clinics in urban areas (*see Figure 1*).

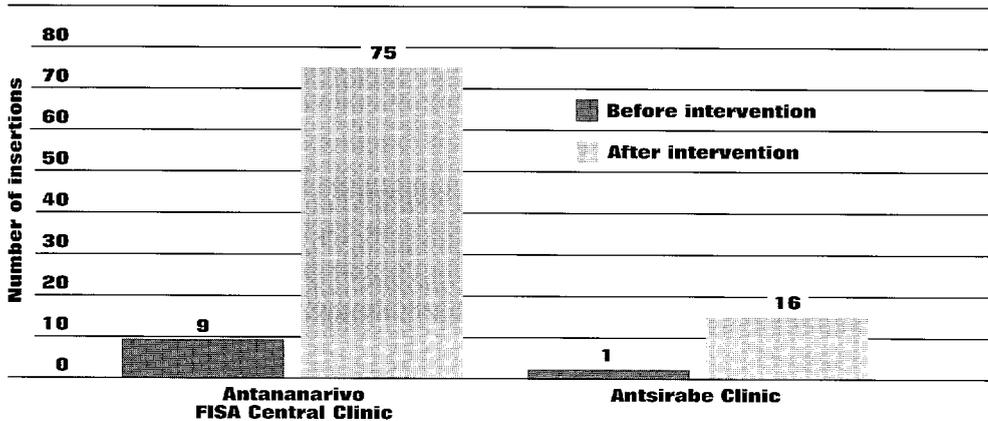
**3. Clients and providers often have different definitions and assessments of quality of care, but both perspectives must be considered in order to improve services.**

In Kenya, clients and providers agreed that provider-client interaction, privacy and confidentiality, cost, proximity of the health facility, and availability of supplies, water, and electricity were essential aspects of quality services. However, for providers, confidentiality is related to the privacy of examination and counseling in a clinic.<sup>18</sup> Clients, on the other hand, defined confidentiality as the ability to prevent the community from knowing about their contraceptive use. Studies are continuing in Kenya to develop appropriate interventions to meet clients' expressed needs.

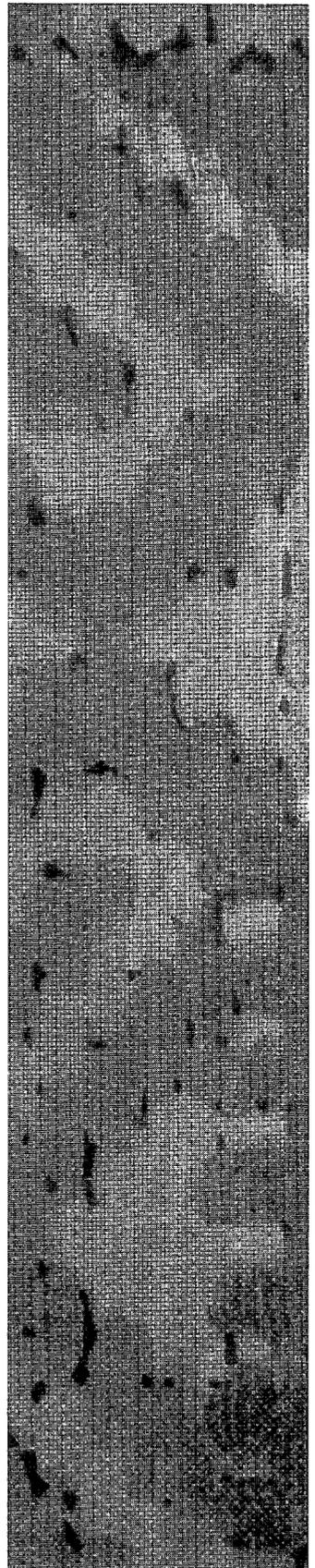
At MEXFAM clinics in Mexico, users considered quality services to include treatment by physicians, short waiting times for services, and pleasant surroundings.<sup>19</sup> In Ecuador, potential clients for family planning services associated higher quality with higher prices, and private physicians were perceived as offering the highest quality at the highest prices.<sup>20</sup>

In Uttar Pradesh, India, the majority of nurse-midwives interviewed were satisfied with the services they provide.<sup>21</sup> However, medical officers interviewed felt that given the widespread lack of adequate clinic space, equipment, and supplies, it made no sense even to discuss the quality of services.

**Figure 1. Change in Average Monthly Number of IUD Insertions**



SOURCE: FISA and Population Council, *An Experimental Program to Increase IUD Acceptance in Madagascar, Final Report* (FISA and Population Council, 1993).





## Reasons for Discontinuation and Mechanisms to Ensure Continuity

### Challenge

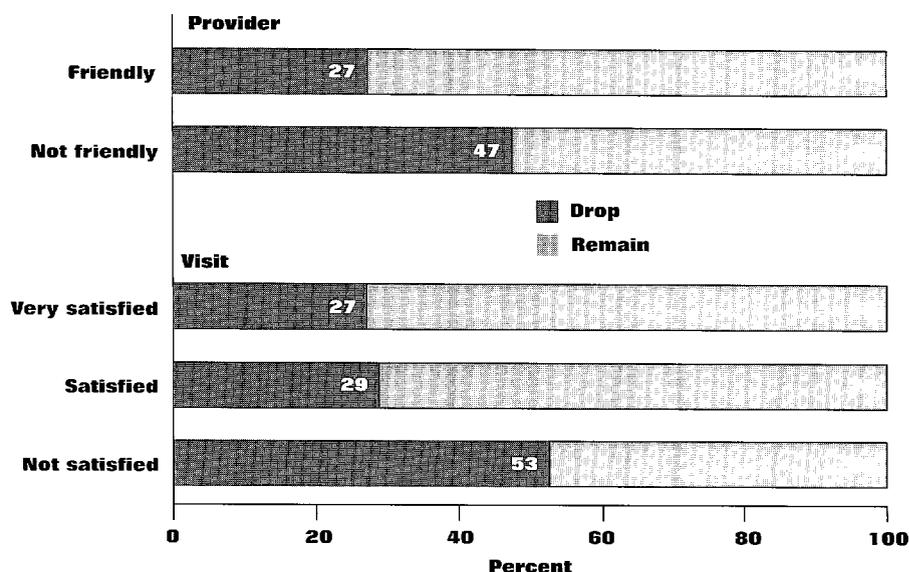
Family planning program performance is typically evaluated using broad outcome indicators such as contraceptive prevalence and number of users by method. While these data provide overall measures of contraceptive use, they fail to describe the dynamics of an individual's use of family planning, such as how long a method is used and whether it is used correctly—both of which can affect fertility.<sup>22</sup> Better understanding of why clients discontinue use, why they switch methods, and whether they use family planning methods correctly can help program managers improve the quality and impact of their programs.

### Findings

#### 1. Dropout rates can be reduced by counseling clients about possible side effects and the advantages and disadvantages of different methods.

More than half of all family planning dropouts in Bukidnon Province, the Philippines, stopped using their method because of side effects.<sup>23</sup> Oral contraceptive pill users were most likely to drop out for this reason. Research showed that clients were less likely to drop out if they thought their provider was friendly, were satisfied with their services (*see Figure 2*), and were told about the advantages and side effects of several methods. This information is now emphasized in provider training and supervision.

**Figure 2. Clients Dropping Out Based on Client View of Provider and Visit**



SOURCE: L. Sealza, *Factors Affecting the Family Planning Program Drop-Out Rates in Bukidnon Province, The Philippines* (Manila: Research Institute for Mindanao Culture, Xavier University, and Population Council, 1995): 44,48.

## 2. Periodic reviews of client continuation and dropout data reveal problems that can be solved through simple interventions, such as better client counseling and follow-up.

Follow-up of clients of the Clinical Services Improvement (CSI) project in Egypt found that the majority were still using family planning four to five years after their initial visit, although only 17 percent were using CSI services.<sup>24</sup> Many had switched to pharmacies or private doctors because of easier access and lower costs. While switching methods and providers do not necessarily indicate program problems, these results helped the CSI project better meet client needs by relocating clinics, upgrading the management information system, and improving follow-up and outreach activities.

A study in the Philippines discovered that women using the injectable contraceptive DMPA were most likely to discontinue between the second and third injections.<sup>25</sup> The study recommended that if women who want to continue using injectables are encouraged to return for their third injection, continuation rates would increase because 80 percent of women who received a third dose returned for a fourth. As a result of the study, distribution of client reminder cards has improved and the client log book has been revised to facilitate better follow-up.

Follow-up of clients practicing natural family planning (NFP) is especially important because correct use of the method requires several training sessions. In Kenya, Ecuador, and Zambia, a management information system specifically designed to track NFP users has improved client continuation.<sup>26</sup> In Ecuador and Zambia, dropouts fell by 50 percent over the course of two years.

Not all client follow-up systems are effective, however. At Chogoria Hospital in Kenya, follow-up of “defaulters”—clients who did not return for scheduled visits—was neither necessary nor cost-effective.<sup>27</sup> The evaluation study found that many defaulters returned to the clinic on their own, and recommended that the community-based agents assigned to follow-up would be better employed making general visits to the population.

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THEY GET IN TO  
ASK FURTHER  
QUESTIONS...”<sup>28</sup>

Family planning  
client, Kenya

## Training and Technical Competence

### Challenge

In order to offer quality services, providers at all levels must be trained to perform competently their assigned duties. In too many instances, however, training falls short.<sup>29</sup> Traditional training programs are often expensive and ineffective, and require providers to leave their posts temporarily. There is a need to test new training strategies and evaluate their impact on services.

### Findings

#### 1. New training strategies can reduce costs and improve the quality of client care.

CBD workers in Paraguay were trained to use a decision tree, the ABC of Primary Care in Family Planning, to guide their interactions with clients.<sup>30</sup> The traditional three-day training course for CBD agents was replaced with a half-day training session on using the ABC decision-making tool. The cost of the ABC training was one-sixth that of traditional training. It resulted in higher quality of care, as measured by checklists completed by simulated clients, and greater client knowledge about contraceptive methods. ABC training is now used for all of the agency's CBD workers. It has also been used by nongovernmental organizations in Haiti and has been adopted by the Ministry of Health in Peru for training field workers.

A diagnostic study of three training courses in the Philippines found that trainees were competent to insert IUDs after seven insertions rather than the required 15.<sup>31</sup> As a result of the study, the Department of Health reduced the number of required IUD insertions to 10 and shortened the duration of supervisor training from 12 days to seven. These changes saved money, and, according to clients interviewed for the study, improved the quality of care. The Department of Health also added a module on quality of care to the basic training curriculum for all providers.

#### 2. Providers are often prevented from delivering the quality of care they have been trained to provide because of inadequate infrastructure, supplies, and equipment.

A situation analysis in Burkina Faso found that providers were technically competent to provide medical counseling and examinations, but many lacked necessary equipment such as blood pressure gauges and sterilizers.<sup>32</sup> A similar study in Senegal found that, in addition to lacking necessary equipment, most service delivery points had no information, education, and counseling materials.<sup>33</sup> In Zanzibar, clinics were found to be well equipped, but half had no running water; two-thirds lacked electricity; and almost half needed disposable supplies, such as gloves, syringes, and needles.<sup>34</sup> Most of the problems identified in these studies have been addressed, some within days, by program managers.

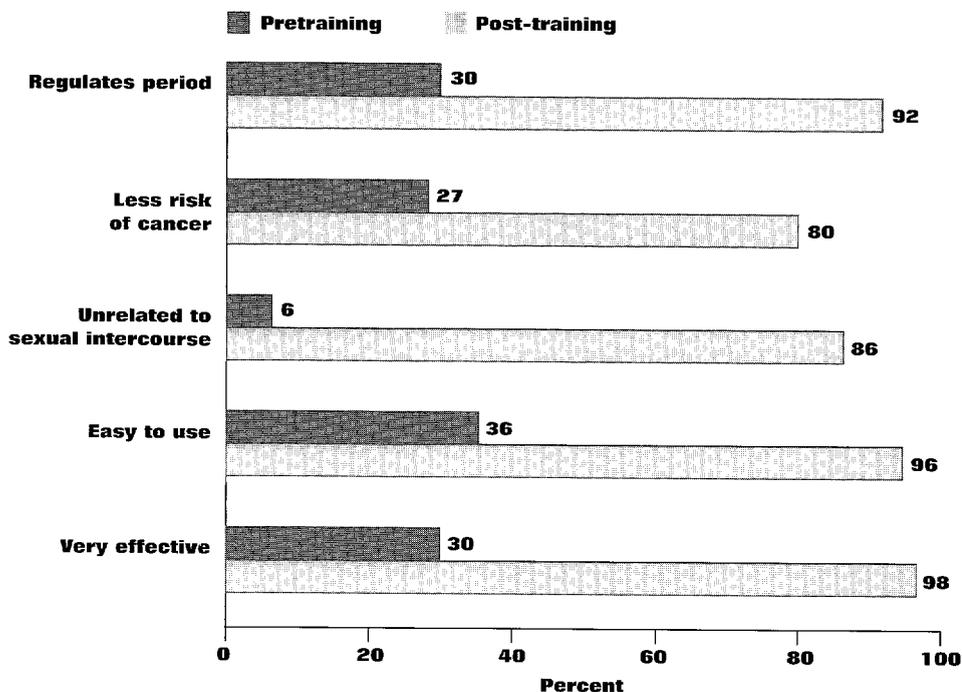
"I WOULD  
RECOMMEND  
ANYONE TO GO TO  
THIS DOCTOR FOR  
COUNSELLING  
BECAUSE HE  
LISTENED TO ME  
PATIENTLY, AND HE  
EXPLAINED WHEN  
THE PILLS SHOULD  
BE STARTED AND  
HOW THEY SHOULD  
BE TAKEN  
REGULARLY."<sup>35</sup>

Evaluation given by  
simulated client,  
Gujarat, India

### 3. Training private sector physicians improves access and quality of care for clients.

In India, few couples use oral contraceptives. A study in Gujarat, India, found that when private medical practitioners were trained in family planning methods, their overall knowledge of oral contraceptives improved, including their perception of the advantages (*see Figure 3*), disadvantages, and side effects. This improved knowledge resulted in better care for their clients.<sup>36</sup> One year after receiving three half-day training sessions, the number of doctors who recommended oral contraceptives to their clients had increased by 23 percent. A simulated client study also showed that trained doctors were more likely to provide their clients with a choice of contraceptive methods. This training model has been expanded by the Indian Medical Association for use in the state of Uttar Pradesh.

**Figure 3. Perceived Advantages of Oral Contraceptives by Private Medical Practitioners in India**



SOURCE: S. Barge, et al., *Use of Private Practitioners for Promoting Oral Contraceptive Pills in Gujarat* (New Delhi: Center for Operations Research and Training, and Population Council, 1995).

## Supervision

### Challenge

Many managers and supervisors of family planning programs are not able to supervise their personnel as effectively as they would like. Supervisory activities should normally include monitoring performance, motivating workers (especially community-based workers) to continue performing their duties well, evaluating competence, and providing skills instruction and reinforcement.<sup>37</sup> Instead, many managers can make only brief and infrequent supervisory contacts, and rely on service statistics to evaluate provider performance. Managers themselves often lack supervision and may not understand their supervisory duties. As services expand, managers need to find cost-effective ways to supervise a wide range of personnel.

### Findings

#### 1. Alternative supervisory strategies, such as district-level meetings and employee self-assessments, can be more cost-effective than traditional supervisory visits.

An OR project in Guatemala tested the impact and cost-effectiveness of alternative supervisory strategies.<sup>38</sup> One strategy was an employee self-assessment workshop, in which participants identified quality-of-care problems at their own sites and developed plans for solving them. Another strategy replaced one supervisory visit to the health unit with a one-day district-level meeting between the supervisor and the providers. Under both alternatives, supervisors were able to reach more health units and service providers at a lower cost per unit. The productivity of health workers, as measured by couple-years of protection (CYP),\* also was greater in comparison with those receiving traditional visits from a supervisor (*see Figure 4*).



J. BEAMISH

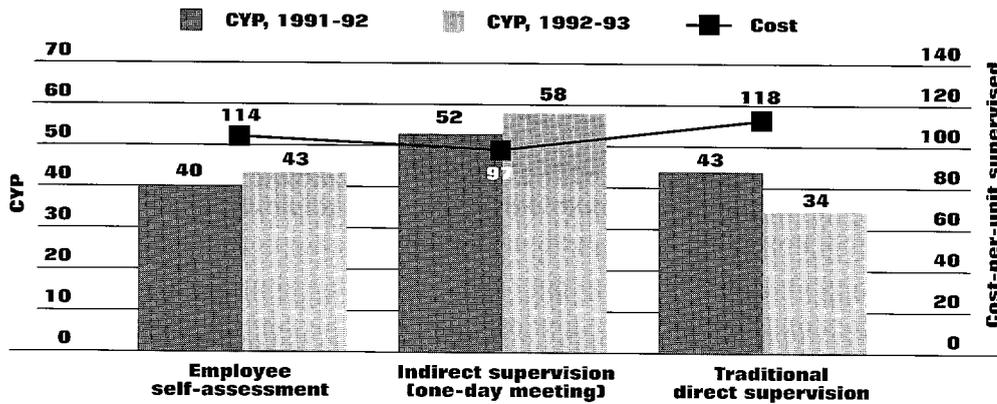
\*CYP is a standardized measure of the potential protection from pregnancy provided by family planning methods delivered to clients during one year.

**2. Method-specific targets often lead to inaccurate reporting of acceptors, and are not an effective way to evaluate provider performance.**

In Pakistan, a follow-up study of IUD users found a large disparity between the number of IUD insertions reported by Family Welfare Centres and the number of actual IUD users.<sup>39</sup> As a result, the Ministry of Population Welfare suspended the IUD target system and is studying more effective performance evaluation systems.

Data gathered in Uttar Pradesh, India, showed that the public sector program favors sterilization and IUDs.<sup>40</sup> Sterilization is used by more than half of all couples practicing family planning. Although pills and condoms are generally available, fewer than 15 percent of couples use them. As a result of this and similar studies in other states, the government of India has now withdrawn all method-specific targets, and new strategies for strengthening the public sector program are being tested. For example, a new reproductive and child health program is focusing on client needs, and management now emphasizes supporting providers rather than monitoring their ability to meet targets.

**Figure 4. Cost and Couple-Years of Protection (CYP) Provided for Different Supervisory Strategies**



SOURCE: R. Vernon, et al., "A Test of Alternative Supervision Strategies for Family Planning Services in Guatemala," *Studies in Family Planning* 25, no. 4 (1994): 232-238.

## Reaching Special Populations

No one service delivery strategy can meet the family planning and related reproductive health needs of all groups. For example, decades of experience have shown that programs effective in urban areas are not necessarily appropriate for rural groups. Operations research has helped program managers and policy-makers (1) identify special groups that, for a variety of reasons, have not been served by traditional family planning programs, and (2) test innovative strategies to reach them.

In order to reach special groups, providers must take services to clients in ways that clients find acceptable. These outreach efforts have included going to people's homes, work, schools, and community gatherings. Sometimes outreach has been most effective when existing, trusted resources are used, such as community leaders, traditional health practitioners, and peers. Other times, mobile clinics and community-based distributors have been used to serve hard-to-reach clients.

Operations research studies give program managers insight about the knowledge, attitudes, and practices of young people and, thus, help them target program activities accordingly. OR also helps program managers understand men's needs: it shows managers how to help men be more responsible and better partners, how to expand male reproductive health services, and how to increase use of male contraceptive methods. Finally, OR continues to test innovative service delivery strategies to improve access to and use of services by residents of rural areas.

"IN THESE CLINICS...  
THERE ARE NOT ONLY  
FAMILY PLANNING  
SERVICES, BUT MANY  
OTHER SERVICES. SO,  
YOU CAN GO THERE  
WITHOUT WORRYING."<sup>41</sup>

Young adult, Senegal.



P. MEADOWS

## Young Adults

### Challenge

Worldwide, many young people are postponing marriage in order to pursue economic activities or stay in school. This change has not always been accompanied by a delay in the initiation of sexual activity. As a result, many young people are beginning sexual relations outside marriage, and the proportion of teen pregnancies occurring outside marriage is rising in some countries.<sup>42</sup> In many countries, laws or traditions have prevented providers from delivering family planning and reproductive health information and services to unmarried youth. Even where no legal barriers exist, providers are often reluctant to address the reproductive health needs of young people—both married and unmarried. Young people rarely use services for the same reason.

Efforts to include youth in family planning and related reproductive health programs have been controversial in many countries. Some fear that including adolescents, especially unmarried teens, will encourage their sexual activity. In the face of changing adolescent sexual behavior, OR is helping program managers, policy-makers, teachers, and parents better understand the unique needs of young people and develop special efforts to meet these needs.

### Findings

#### 1. Family life education (FLE) courses that include information on family planning and reproduction are effective and acceptable, and do not lead to greater sexual activity among students.

A survey of parents, teachers, and students in Mexico found that most respondents favored offering FLE courses in all secondary schools.<sup>43</sup> After taking an FLE course, students had greater knowledge of family planning and reproduction. The proportion of students who were sexually active did not change, but sexually active students who took the course were more likely to use contraceptives than other sexually active students. The FLE course, "Plan Your Life," has been implemented in 100 public and private schools in Mexico to the benefit of more than 13,000 students.

Studies in The Gambia and Senegal found that adolescents who attended FLE courses knew more about contraception and that attendees who were sexually active were more likely to have used contraception than those who did not attend a course.<sup>44</sup> Students who took an FLE course also were more likely to use contraception at first intercourse than those who did not attend an FLE course.

#### 2. Special programs for young people can be effective sources of family planning information, but youth benefit from information provided through a variety of sources aimed at other audiences.

Newly married young women in Bangladesh reported that they first learned about family planning at a young age from community-based family planning workers, female relatives, peers, and the media.<sup>45</sup> Although these girls were not the intended audience, they benefited from overhearing conversations and observing adults. Discussions with friends provided important opportunities for young girls to share their knowledge of sexuality and contraception.

"THE GIRLS ARE OBSERVING MAHMUDA, WHO COMES AND TALKS WITH THEIR MOTHERS, AUNTS, AND SISTER-IN-LAWS [SIC]. THEY QUITE OFTEN LISTEN TO WHAT SHE SAYS AND HAVE LEARNED MANY THINGS. THEN THEY THEMSELVES DECIDE THAT THEY WILL NOT GIVE BIRTH TO MANY CHILDREN, AND WILL TAKE CONTRACEPTIVES FROM THE NIGHT OF MARRIAGE."<sup>46</sup>

Focus group participant, Bangladesh

## Men

### Challenge

Women have traditionally been the focus of family planning and other reproductive health programs. However, experience has shown that excluding men, who play important roles in reproductive decision-making, limits the effectiveness of these programs. The 1994 ICPD called for gender equality as well as measures that enable men to take responsibility for their sexual and reproductive behavior. There is now greater awareness of men's role in reproductive health, but more needs to be done to include them in services, to increase their use of family planning, and to encourage their support for their partners' choice and use of a contraceptive method.

### Findings

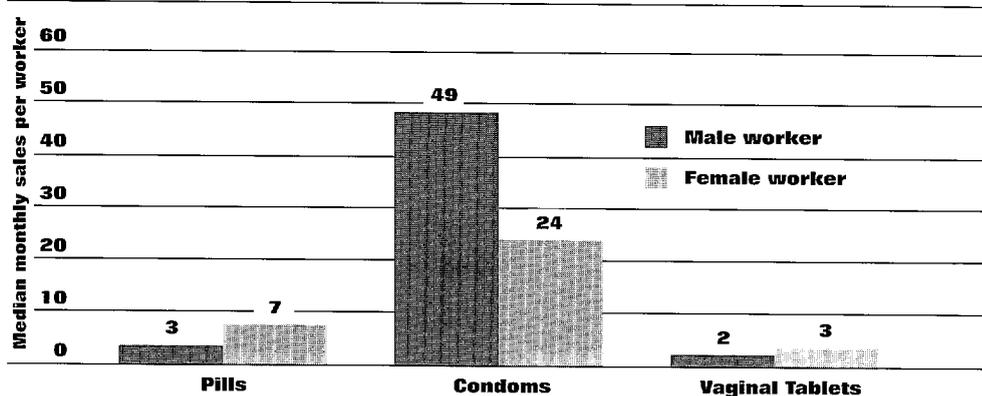
#### 1. Providing men with separate family planning services can attract more male clients but may also increase costs.

In Peru, a greater proportion of men attended afternoon clinics that were devoted exclusively to family planning services than morning clinics that integrated these services with maternal and child health services.<sup>47</sup> However, the cost per new acceptor of the afternoon clinics was greater than the cost for the integrated morning services. Although men-only clinics in Colombia did attract more vasectomy clients, the increase was not found to be worth the added expense.<sup>48</sup>

#### 2. Reproductive health messages and services can be delivered effectively to men through male CBD workers, community and religious leaders, and predominantly male organizations.

Studies in Kenya and Peru showed that male CBD workers were more successful in distributing condoms to men than were female CBD workers (see Figure 5).<sup>49</sup>

**Figure 5. Contraceptive Sales by CBD Workers in Peru**



SOURCE: J. Foreit, et al., "A Comparison of the Performance of Male and Female CBD Distributors in Peru," *Studies in Family Planning* 23, no. 1 (Jan.-Feb. 1992): 58-62.

Similar findings have prompted Mexico and many other developing countries to increase the number of male CBD workers who specifically reach out to men.<sup>50</sup>

Successful interventions tested in Mexico and Honduras have led an increasing number of union, agricultural, community, and recreation organizations predominantly composed of men to provide reproductive health education and contraceptives to their members.<sup>51</sup>

In Cameroon male opinion leaders have been trained to provide family planning education and to sell condoms and spermicides. This has increased the knowledge and use of family planning among community members.<sup>52</sup> The use of modern methods of family planning among the male opinion leaders themselves has increased from 0 percent to 55 percent.

In rural areas of The Gambia, villagers' misconception that Islam prohibits the practice of family planning was addressed by training Islamic religious leaders, or imams, to educate other imams and local residents about family planning.<sup>53</sup> Through village meetings held by the imams, contraceptive use and acceptance of family planning increased. As a result of this study, other donors have developed similar programs to train religious and community leaders in several additional Gambian villages.

### **3. The demand for vasectomy can be increased by using the mass media to publicize the method and by using satisfied vasectomy clients as peer counselors.**

Six OR studies in Latin America have demonstrated that the decision to have a vasectomy is greatly influenced by the attitudes of providers, wives, and satisfied vasectomy customers.<sup>54</sup> In several Mexican states, men who have had vasectomies now assist male family planning workers in their outreach activities.<sup>55</sup>

Mass media have successfully been used in Brazil, Colombia, and Mexico to publicize vasectomy services and to educate men about the procedure.<sup>56</sup> Although vasectomy is still rarely adopted by men in Africa, studies in Kenya showed increased demand for the method following media campaigns and provider training.<sup>57</sup>



## Rural and Indigenous Populations

### Challenge

Despite the widespread success of community-based distribution programs in reaching rural residents, many people still lack family planning and other reproductive health services. Not only does it cost more to provide services in rural areas (because of travel costs and fewer clients per health worker), but religious and cultural values can present additional barriers to demand for and use of these services among rural and indigenous populations.

### Findings

#### 1. Training paraprofessional providers, even where modern health workers are active, is an effective way to expand services to rural populations.

A study in rural Kenya demonstrated that traditional and modern health practitioners can collaborate to provide family planning and primary health services in rural communities.<sup>58</sup> When male herbalists and female traditional birth attendants were trained to become CBD agents, the use of modern contraceptives increased. The study also found that other village professionals, such as chiefs, elders, association leaders, retired teachers, and civil servants, were interested in being trained and volunteering their time.

In India, the Bihar State Cooperative Milk Producers' Federation began offering family planning and MCH services at women's homes and workplaces.<sup>59</sup> Village women were trained to provide clients with contraceptive methods and family planning information. The project increased acceptance and knowledge of contraception among women in the area, many of whom had no previous access to methods. The proportion of women who had ever used contraception increased from 26 percent to 37 percent. The women trained as health workers gained more respect within their communities and participated more in household decision-making. The Bihar project has been extended to include a study of costs and sustainability. This model is also being replicated in Uttar Pradesh.

#### 2. Using traditional channels for communication and training influential community members to promote family planning help ensure that messages are delivered in a culturally appropriate way.

In Ghana, the Navrongo Community Health and Family Planning Project found that village gatherings offered good opportunities to build acceptance of family planning and other reproductive health services among traditional, rural people.<sup>60</sup> Communicating through village chiefs and elders has helped legitimize program activities, but active networks of peer leaders have been more effective at communicating health and family planning information to the community.

"THE PROGRAM  
HAS EMPOWERED  
THEM... PEOPLE HAVE  
BECOME HEALTH  
CONSCIOUS... BEFORE  
THE PROGRAM,  
WOMEN WOULD  
NOT ANSWER ANY  
QUESTIONS ABOUT  
FP... (AFTERWARDS)  
WOMEN THEMSELVES  
APPROACHED THE  
CHNS OR THE TBAS  
(TRADITIONAL BIRTH  
ATTENDANTS) WHEN  
THEY VISITED THE  
VILLAGES."<sup>61</sup>

Researcher in The Gambia

In The Gambia, two community-based strategies to increase contraceptive prevalence in rural areas proved effective.<sup>62</sup> One strategy provided support to the Ministry of Health's community health nurse (CHN) who provides services to several villages within her assigned circuit. This support included supervision and provision of a motorcycle, fuel, contraceptive commodities, and a monthly salary supplement. The second strategy focused on "demand mobilization"—the promotion of family planning through female-only health sub-committees and through male imams. Contraceptive prevalence increased 12 percent in the areas receiving both CHN support and demand mobilization and increased 10 percent in areas receiving demand mobilization alone. In the area receiving no new intervention, contraceptive prevalence rose 5 percent. As a result, the Ministry of Health is expanding this study to other areas in the country.

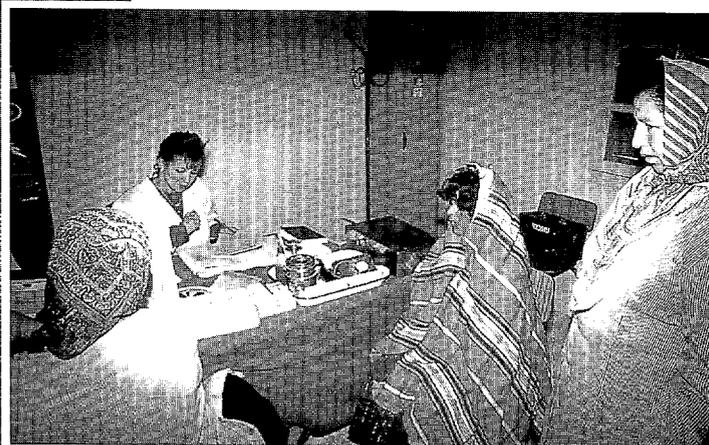


S. SPRAGUE

## Integrating Reproductive Health Services

Programs that provide a range of integrated reproductive health services have been gaining popularity among managers and planners of family planning programs. This interest is, in part, a result of the 1994 ICPD, which emphasized integrating all aspects of reproductive health care. Integrated reproductive health care covers a wide range of services for men and women, including family planning, STI prevention and treatment, postpartum and postabortion care. It is thought that providing integrated services may be more cost-effective than providing separate services, may better meet the needs of clients, and may lead to better overall health for clients and the larger community. OR is helping test these assumptions and guide the combination and delivery of integrated services.

OR studies are examining strategies to improve the quality of emergency postabortion services, introduce better technologies to treat postabortion cases, and integrate family planning and other reproductive health services with postabortion care. Studies are also testing mechanisms for introducing and promoting appropriate methods of family planning during the postpartum period as well as promoting breastfeeding to improve childspacing and child health. In addition, program managers and policy-makers are interested in the feasibility and success of integrating STI programs with family planning services. Researchers are studying the relative costs and benefits of combining a variety of services, and the effects of this integration on quality of care. They are also examining whether integrated services are actually being delivered as planned.



WORLD BANK. C. CARNEMARK

## Family Planning and Postabortion Care

### Challenge

Thousands of women die and millions more are hospitalized each year because of complications from incomplete abortions, either spontaneous or induced under unsafe conditions. In addition to the health effects of unsafe abortion, postabortion care drains scarce medical resources.<sup>63</sup> Although postabortion clients can be at immediate risk for another pregnancy, they often do not receive counseling about family planning because providers have not been trained to include this information in postabortion care.

### Findings

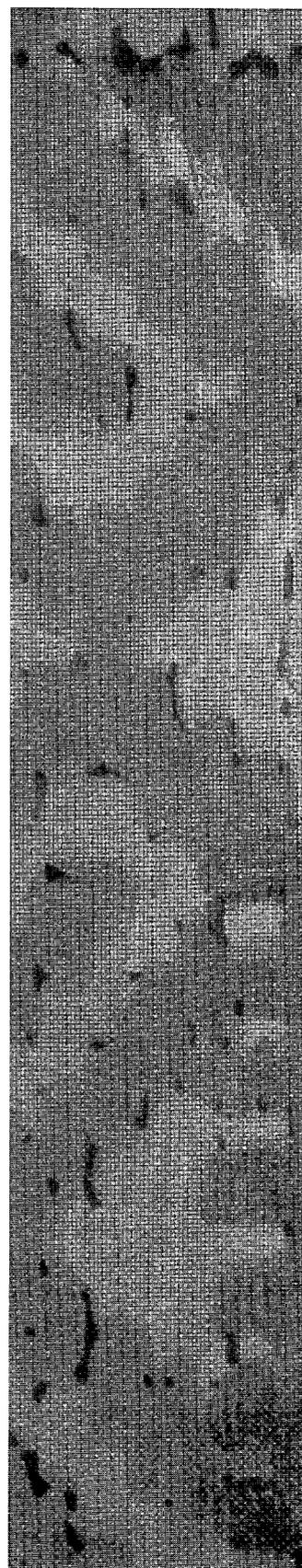
#### **1. Improving the quality and availability of comprehensive postabortion care can reduce costs to clients and providers.**

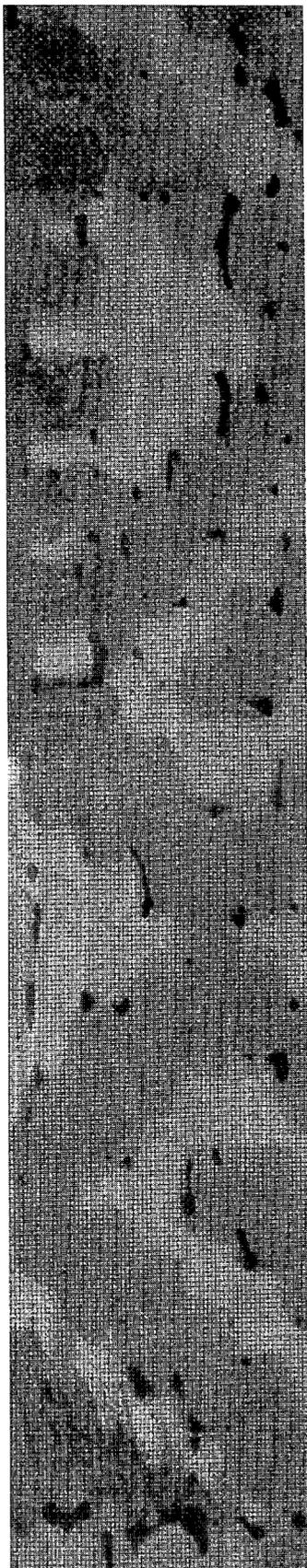
Cost studies in Kenya and Mexico documented lower costs for postabortion care when manual vacuum aspiration (MVA) was used in place of dilation and curettage (D&C)—largely because women's hospital stays were shortened.<sup>64</sup> As a result, postabortion care with MVA has been expanded to 200 social security hospitals in Mexico, and services are currently being expanded in Kenya. Despite these cost savings, a study in Peru identified administrative barriers to fully realizing these savings, such as a requirement that women remain hospitalized until the cashier's office opened for payment.<sup>65</sup>

#### **2. Linking postabortion care with family planning can increase contraceptive use, but providers need special training in medical techniques and counseling.**

A study in Egypt found that of 300,000 postabortion clients seen annually in public sector hospitals, nearly all received D&C procedures under general anesthesia.<sup>66</sup> A pilot study in a major teaching hospital showed that training physicians in MVA and postabortion care reduced the use of general anesthesia, fostered doctors' interpersonal skills for dealing with clients, improved infection control procedures, and increased client satisfaction.<sup>67</sup> Clients who received counseling were also more likely to say they would use a method of family planning (*see Figure 6, next page*). Postabortion services are now being institutionalized in 10 more centers in Egypt, and similar studies are under way in Honduras, Mexico, Peru, Kenya, and Burkina Faso.

A study of postabortion clients in Guatemala found that most were satisfied with the postabortion care they had received in the hospital and many were interested in family planning prior to discharge.<sup>68</sup> Most women did not know the symptoms of postabortion complications, nor did they know how soon their fertility would return. As a result of this study, the range of contraceptive methods available at the hospital has increased, and information sheets for clients have been developed.

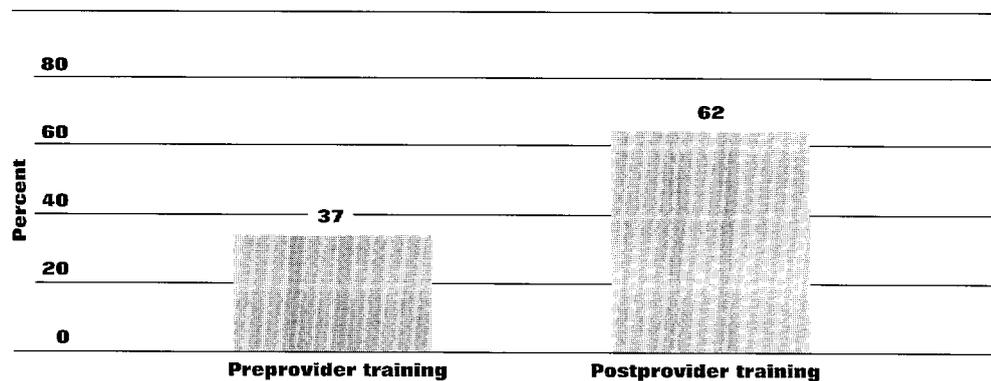




### 3. Postabortion patients benefit from having their husbands counseled.

Spousal support can be an important factor in the emotional and physical recovery of postabortion patients. Initial results from a study in Egypt found that counseling husbands as well as wives helped alleviate concerns about recovery and future fertility and inform the couple about the need to use a contraceptive method.<sup>69</sup> These findings are included in the counseling curricula being developed to improve postabortion care in Egypt.

**Figure 6. Impact of Provider Training in Postabortion Counseling on Postabortion Patients Intention to Use Contraception**



**Percent of postabortion patients who answered "yes" to the question, "Did you decide to use a family planning method during this visit?"**

SOURCE: E.O. Hassan, et al., *Improving the Counseling and Medical Care of Post Abortion Patients in Egypt* (Cairo: The Egyptian Fertility Care Society and Population Council, May 1995).

## Family Planning and Postpartum Services

### Challenge

Women who have just given birth may not be thinking about their next pregnancy, but they can soon be at risk of pregnancy. Family planning information and services made available during the postpartum period can help women avoid unplanned pregnancies.<sup>70</sup> Adding family planning to established maternity services may be cost-effective, since both programs provide services to women of reproductive age. However, more information is needed about the cost and impact of integrating these services, and about clients' attitudes toward combining the two.

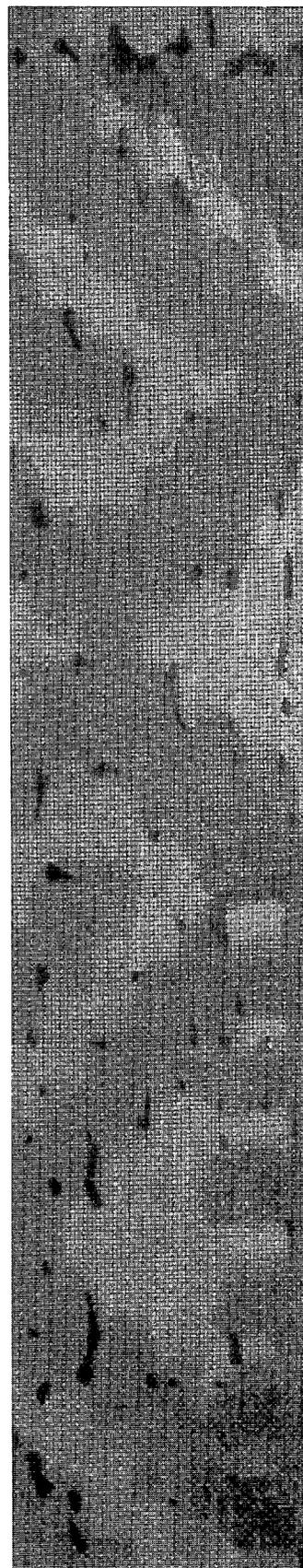
### Findings

#### 1. Maternity programs that include family planning in their range of services are popular and feasible in both urban and rural settings.

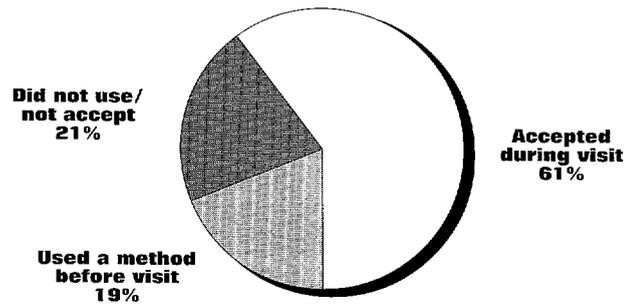
In order to reach the majority of Haitian women who deliver at home, the Comité de Bienfaisance de Pignon (CBP), an organization providing health services in rural areas, added pre- and postnatal checkups, breastfeeding counseling, vaccinations, and family planning to their services.<sup>71</sup> Because of the expanded services, CBP reached more than half of the women who delivered babies in its service area during a four-month period, and one-third of these women adopted a family planning method. Since adding the new services, CBP has more than doubled the size of its integrated rural maternity program.

In Honduras, a hospital-based program for postpartum women increased women's reproductive health knowledge and significantly increased use of family planning.<sup>72</sup> The program encouraged women to return 40 days after delivering their babies to receive postnatal care for themselves and their infants. During the visit, women who had not yet adopted a family planning method were given a second opportunity to do so. More than half of those attending the postpartum clinic accepted a method at that time (*see Figure 7, next page*). The social security system now offers all subscribers postpartum family planning when they are in the hospital and again at the 40-day visit.

A study in Togo showed that women bringing their children to MCH clinics for immunizations are also receptive to family planning information.<sup>73</sup> When referral messages about family planning were given to mothers during these immunization sessions, the average number of new contraceptive users per month increased by 54 percent over a six-month period.



**Figure 7. Acceptance of Contraceptives During Visit to 40-day Postpartum Clinic, Honduras IHSS**



SOURCE: R. Vernon and C. Brambila, *Reproductive Health and Prenatal Care* (Tegucigalpa, Honduras: IHSS and Population Council, 1992): 14.

**2. Postpartum family planning is cost-effective.**

In Brazil, the private health maintenance organization, PROMEDICA, found that every \$1 invested in postpartum family planning services saved the company \$2.80 in pregnancy-related services. Postpartum adoption of family planning methods also reduced the number of pregnancy-related hospital visits among women during the 21 months following their last birth.<sup>74</sup>

**3. Promotion of breastfeeding can improve child health and prevent pregnancy.**

At CEMOPLAF in Ecuador, the lactational amenorrhea method (LAM)\* was successfully integrated into a multimethod family planning program.<sup>75</sup> One-third of all postpartum clients adopted LAM within the first five months of the program, and nearly half were first-time family planning users. As a result of the LAM program, CEMOPLAF's IUD insertion policy was revised to permit insertion during amenorrhea if the woman is fully or nearly fully breastfeeding.

A study in urban Brazil showed that infants whose mothers practiced LAM had lower rates of illness and hospitalization than infants whose mothers did not use LAM.<sup>76</sup> Because of its effect on infant health, LAM was made a routine part of all postpartum services.

In rural Philippines, mothers who received breastfeeding education introduced supplements later, breastfed more intensively, and used fewer bottles than other mothers.<sup>77</sup> Despite these improvements in breastfeeding, there was no change in the duration of lactational amenorrhea among these women. Breastfeeding education did, however, contribute to improved infant health.

\*LAM is a temporary family planning method that allows mothers to delay the return of fertility for approximately six months by fully and exclusively breastfeeding their infants.

## Family Planning and Sexually Transmitted Infections

### Challenge

Prevention, diagnosis, and treatment services for sexually transmitted infections (STIs) have usually targeted men and commercial sex workers, the groups thought to be at highest risk of infection. However, the increasing prevalence of STIs, including HIV/AIDS, in the general population, and the desire to address a range of client needs in one visit have led program managers to consider integrating family planning and STI services.

### Findings

#### **1. Integrating STI services into a MCH/FP program increases the number of clients receiving services, increases use of family planning, and may save money.**

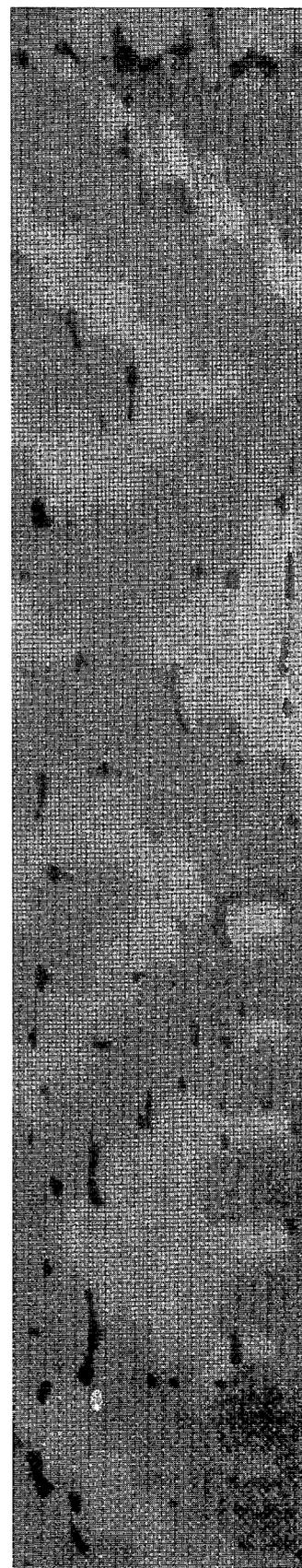
Integrating STI/HIV/AIDS services with MCH/FP services in Uganda increased both the number of clients receiving MCH/FP services and the distribution of contraceptives.<sup>78</sup> The integrated program also identified and treated many clients with STIs who did not have symptoms, and who might otherwise not have been treated. In Kenya, the cost of providing integrated STI/HIV/AIDS and MCH/FP services is estimated to be one-third less than the cost of providing separate services.<sup>79</sup> Cost studies are continuing to measure the long-term cost impact of integrated services.

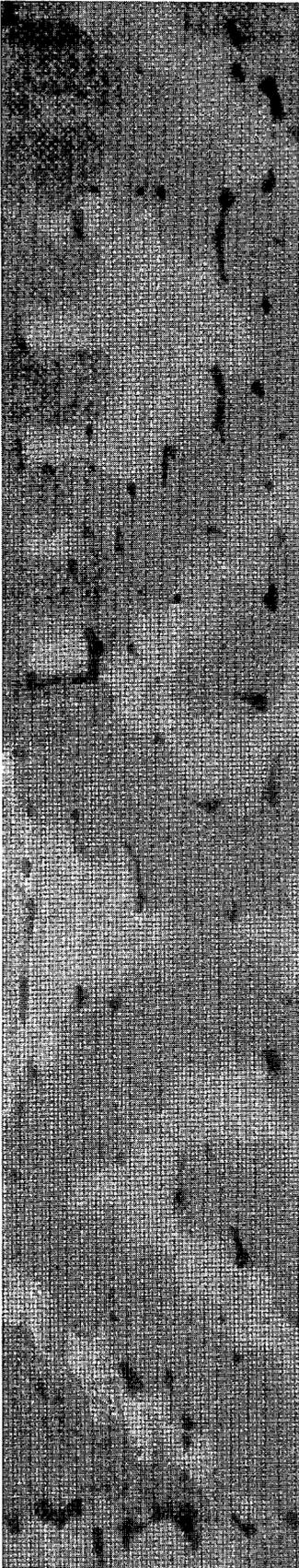
In Uttar Pradesh, India, a pilot study on managing reproductive tract infections (RTIs) through the primary health care system found that training district-level primary care staff to treat RTIs can be effective.<sup>80</sup> However, few people seek treatment for RTIs at primary health care centers. Depending on levels of infection and use of services, the cost of managing an RTI case varies widely, from 63 rupees (\$1.62) to 157 rupees (\$4.00) per client.

#### **2. Existing policies and procedures for separate FP and STI programs may restrict integrated services and, therefore, need to be reviewed and revised. Official policies for providing integrated services are not always followed at the clinic level.**

In Uganda, a study of integrated STI and MCH/FP services found that new family planning clients were not adequately screened for STIs. Despite the use of a diagnostic checklist, fewer than two-thirds of new FP clients were asked about family or medical history, or lower abdominal pain (*see Figure 8 next page*).<sup>81</sup>

Although nurses in Kenya have been trained to diagnose STIs, government regulations prohibit them from prescribing antibiotics.<sup>82</sup> In addition, some drugs have been earmarked for distribution only through STI programs. In Botswana, despite an official policy that every client receive all MCH/FP services and other preventive and curative services during one visit, a study



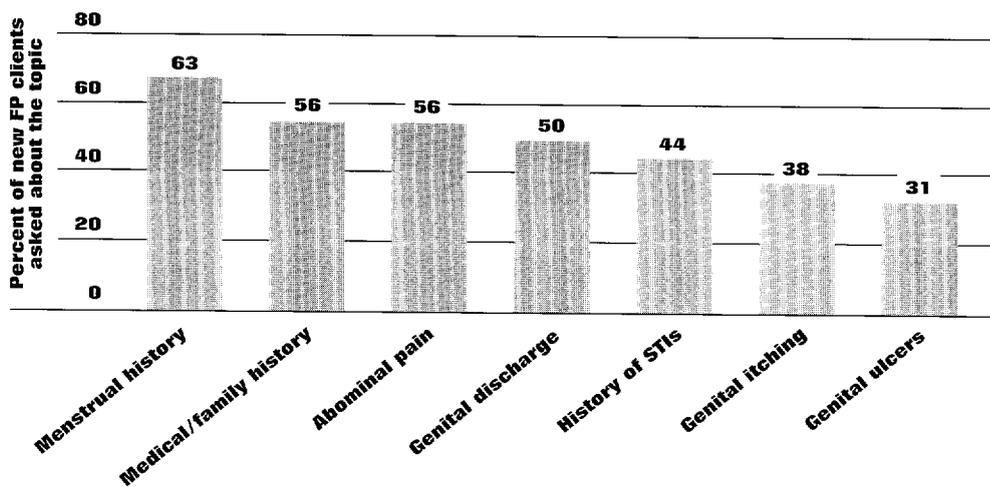


found that a significant number of facilities did not provide HIV/AIDS information and services.<sup>83</sup> As a result, Ministry of Health officials initiated a supervisory checklist and refresher training for supervisors and medical store staff. It also created a task force to review client record forms, service guidelines, and information, education, and counseling materials.

**3. Many family planning clients are at risk for STIs and are willing to use two family planning methods, if necessary, to prevent both STIs and pregnancy.**

A study of family planning clients in Jamaica found that one in five had used condoms in addition to another family planning method in the previous month.<sup>84</sup> Clients who had a new partner, who knew how to protect against STIs, and who were able to communicate with their partner were more likely to use two methods. Although providers thought that family planning clients were at low risk for STIs, more than one-quarter were diagnosed with an STI and received treatment.

**Figure 8. History Taken to Screen FP Clients for STIs in Integrated FP/STI Services**



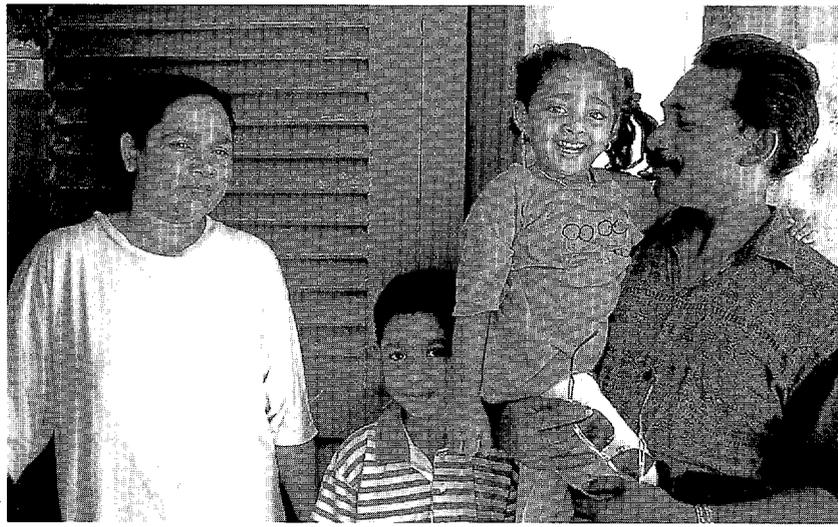
SOURCE: J. Mukaire, et al., *Integration of STI and HIV/AIDS Services with MCH-FP Services: A Case Study of the Busoga Family Life Education Program, Uganda* (Population Council, Africa OR/TA Project, January 1997): 16.

## Increasing Sustainability

Making programs sustainable without substantial external assistance has become a priority in most countries. Sustainable programs are those that have sufficient resources to cover operating costs. Self-sustaining programs rely solely on internal resources. Accomplishing sustainability in any form may require both increasing cost-effectiveness and cost recovery.

The lower the cost per unit of output (i.e., the lower the cost of meeting the needs of a family planning user), the more cost-effective the program. Program cost-effectiveness must also consider client satisfaction and continuation. While cost-effectiveness does not guarantee sustainability, it is in the program's best interest to adopt cost-effective strategies. OR helps determine the relative cost-effectiveness of alternative approaches and test ways to streamline program activities to improve cost-effectiveness while maintaining quality services.

Cost-recovery strategies are increasingly important as program managers seek ways to generate income and reduce reliance on external sources of funding. Current OR studies on cost recovery look at (1) the client's ability to pay for services, (2) innovative income generation strategies, and (3) ways to involve the private sector in family planning service delivery.



D. JACOBSON

## Cost-Effectiveness

### Challenge

Cost-effectiveness is an important issue for program managers who are trying to make the best use of available resources without compromising the quality of services. A program's costs are continually weighed against its success at meeting the contraceptive and other reproductive health needs of clients. An analysis of cost-effectiveness requires a clear definition of the goals of the program, as well as accurate measures of all costs.<sup>85</sup> The timing of a cost-effectiveness analysis also affects the outcome, because start-up costs can be high and cost-effectiveness improves over time. Managers need information about program changes that impact cost and improve cost-effectiveness.

### Findings

#### **1. Making the best use of staff time and eliminating unnecessary procedures can reduce costs and improve a program's quality and operating efficiency.**

A study at CEMOPLAF in Quito, Ecuador, found that requiring only one IUD follow-up visit instead of four reduced costs for the agency and the client, improved access and convenience for clients, and only slightly reduced detection of medical problems.<sup>86</sup> The savings realized by eliminating multiple revisits were invested in training, which enhanced service quality and the agency's overall sustainability.

A study in Senegal found that mandatory laboratory testing for all clients who wanted to use oral contraceptives was costly for clients and not cost-effective for programs.<sup>87</sup> Since few women had medical conditions that prevented them from using a particular method, researchers recommended that lab tests be used only to confirm contraindications identified in medical histories and clinical exams. Although the government adopted this recommendation, many providers have resisted the change and continue to require lab tests of new oral contraceptive users.

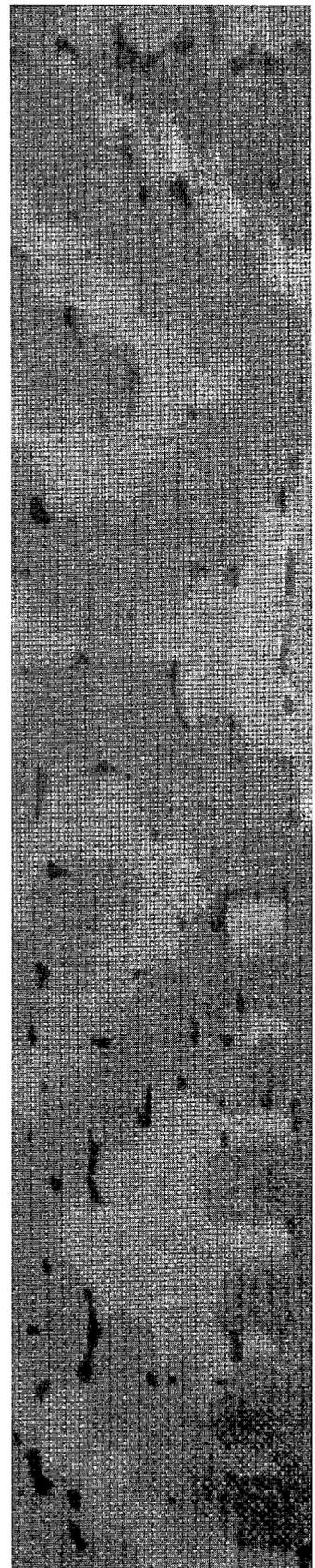
A systems analysis of a hospital-based family planning program for adolescent mothers in Mexico City found that much of employees' time was spent in nonproductive activities.<sup>88</sup> Cost-effectiveness doubled when the program was consolidated and the number of employees was reduced. As a result of these cost savings, the program was replicated in five other Mexico City hospitals.

#### **2. For-profit and employer-based programs can be persuaded to offer family planning if cost savings are demonstrated.**

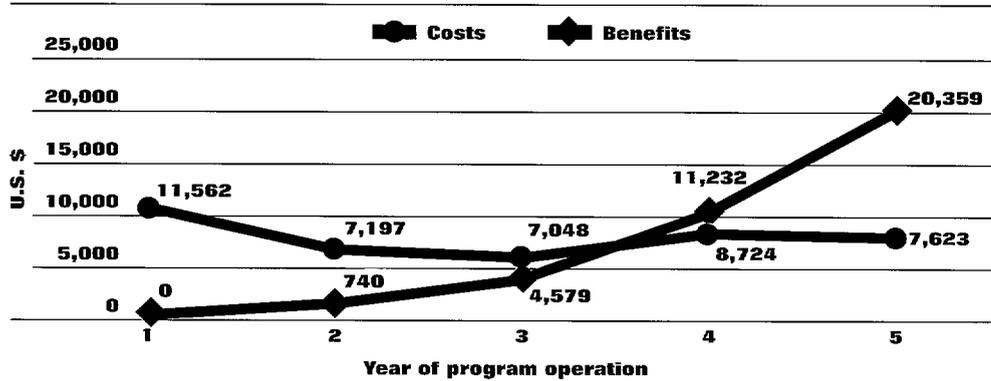
The wives of miners employed at a private mining company in Milpo, Peru, had high levels of fertility and low levels of contraceptive use, but they wanted to limit childbearing. A cost-benefit analysis of providing family planning and maternal and child health services projected that by the fourth year, savings from births averted would compensate for the costs of providing the services

(see Figure 9).<sup>89</sup> The company successfully added MCH/FP services to its existing medical center without government or donor subsidies. Eighteen months after the program was implemented, contraceptive use among women in the mining town had risen by 41 percent. As a result of the Milpo program, two other mines in the area now offer MCH/FP services.

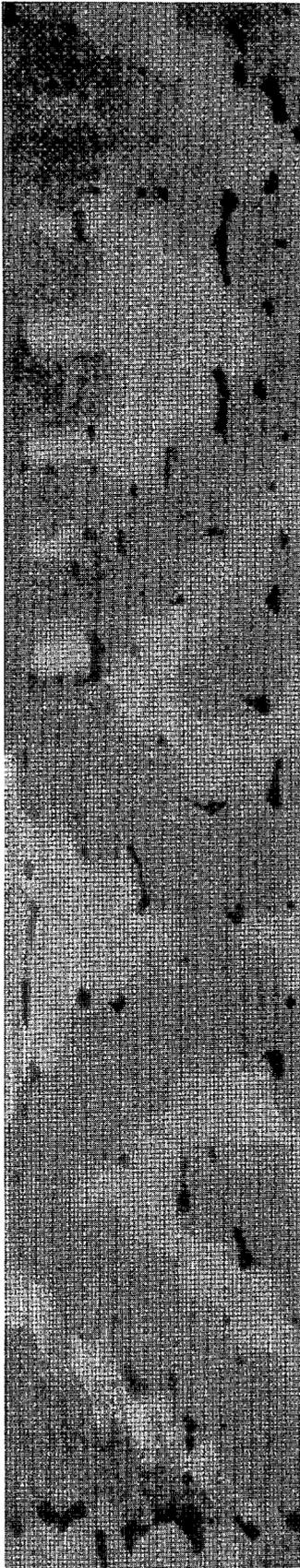
In the Philippines, a study of industry-based family planning and MCH programs showed that these services were more likely to become institutionalized in the following instances: (1) when management has established explicit policies about the health and welfare of employees; and (2) when there is management commitment and support of family planning services, and cooperation at all levels of the program, including among managers, clinic staff, and volunteers.<sup>90</sup> The study also showed that the better the financial status of the company, the more committed managers were to supporting the program and ensuring high-quality services.



**Figure 9. Projected Annual Costs and Benefits of Family Planning Services at the Milpo Mine, Peru**



SOURCE: K. Foreit, et al., "Cost and Benefits of Implementing Family Planning Services at a Private Mining Company in Peru," *International Family Planning Perspectives* 17, no. 3 (September, 1991): 91-95.



## Cost Recovery

### Challenge

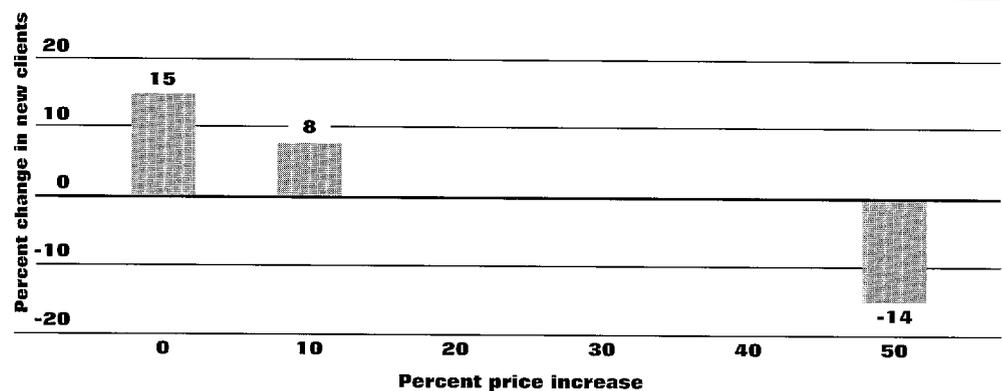
Family planning programs often provide contraceptives free of charge, and some offer incentives to clients who adopt methods. With declining government and donor resources, however, cost recovery in family planning programs has become critical. Efficient and sustainable service delivery is an important standard for program success, but at the same time, program managers seek to maintain quality services and to provide a wider range of services to a greater number of clients.<sup>91</sup>

### Findings

- 1. Although small increases in the price of contraceptives generally will not reduce the number of users, large price increases can cause clients to seek less expensive sources.**

In some Latin American countries, studies found that when initial prices for family planning methods and services were low, the client load declined only when the prices increased by 50 percent or more. Service statistics from sixteen APROFE clinics in Ecuador showed that modest price increases did not have a great effect on the number of new IUD clients. However, when price increases reached 50 percent, the demand for IUDs declined substantially (see Figure 10).<sup>92</sup> In Peru, a study showed that most users (76 percent) who dropped out of family planning programs for economic reasons continued to use family planning, but switched to less expensive providers.<sup>93</sup> A study in Mali (West Africa) found that the majority of clients at public clinics could afford to pay for services, but that a two- or three-tiered price structure was needed to accommodate most clients.<sup>94</sup>

**Figure 10. Impact of Price Changes on Demand for IUDs in Ecuador**

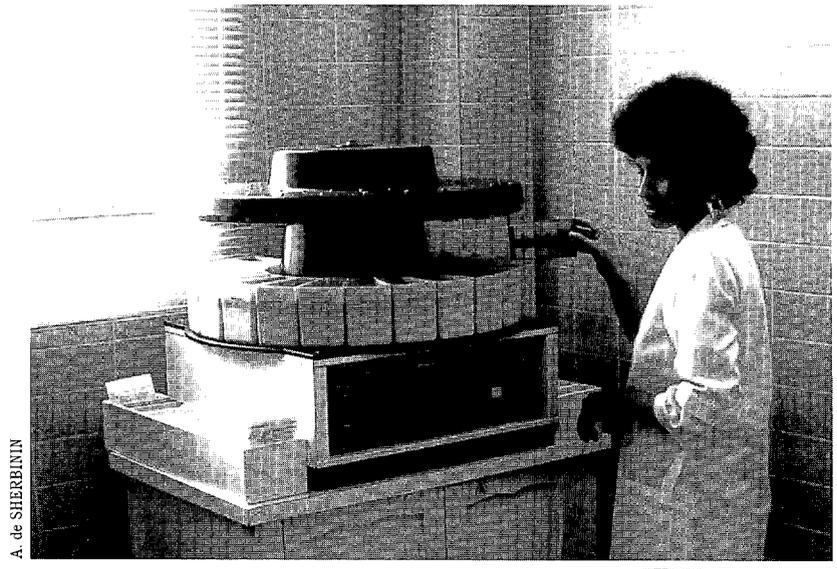


SOURCE: Population Council, *INOPAL II Project Final Report 1989-1995* (New York: Population Council, 1996): 11.

**2. Programs can benefit from innovative cost-recovery strategies.**

An ongoing study in Navrongo, Ghana, is testing a cost-recovery strategy that relies on community committees to manage the collection and distribution of funds and commodities in a CBD program. According to preliminary results, there have been no commodity stockouts, and revenues from sales of contraceptives consistently exceed costs.<sup>95</sup> A similar approach is being tested in Bazega province, Burkina Faso.

Many Latin American nongovernmental organizations have generated income by selling profit-making services, such as laboratory and diagnostic testing. These profits are used to subsidize nonprofit family planning activities. At CEMOPLAF in Ecuador, for example, profits from selling ultrasound services amounted to several thousand dollars per year.<sup>96</sup> By offering a range of reproductive health laboratory tests—even at below-market prices—CEMOPLAF has also made a profit.<sup>97</sup> Its experience, and that of other agencies in Latin America, has shown that each income-generating activity often contributes a small amount to overall financial sustainability. A variety of profit-making services are necessary to support the overall costs of a program.



A. de SHERBININ

## IV

### Future Directions

Operations research in family planning and reproductive health has evolved from strategies for introducing services to innovations in service delivery, continuous problem solving, and quality improvement. While the findings presented in this booklet show some of what has been learned from recent OR studies, research continues to build on these results and address new challenges.

With the number of men and women in the reproductive ages expected to be a third larger in 2005 than it was in 1990, even maintaining current levels of contraceptive use will be difficult without large increases in resources.<sup>98</sup> OR is needed to demonstrate cost-effective strategies to meet the reproductive health needs of this growing population. In addition, emphasis now is on disseminating, using, and following-up research results; developing local capacity in OR; and increasing collaboration among researchers, program managers, and policy-makers.

#### New paths in operations research

While addressing specific problems in the delivery of family planning services, OR has begun to help program managers and policy-makers determine how best to implement the policy recommendations of the 1994 ICPD. To this end, OR continues to investigate how to improve quality and efficiency and how to reach special populations such as refugees, urban migrants, and indigenous groups. OR studies continue to test the cost-effectiveness and feasibility of integrating selected reproductive health services with family planning in a variety of settings. OR also continues to investigate how best to meet the reproductive health needs of adolescents and men in various cultural settings.

Operations research is expanding into new arenas such as developing strategies to provide emergency contraception (EC) and studying the impact of EC on regular contraceptive use. OR has also begun to develop and test interventions to prevent harmful practices such as female genital mutilation. OR methodologies, such as situation analysis, are being applied to assess quality in other areas of health care.

"WE NEED A MECHANISM TO ENSURE UTILIZATION, AFTER ALL, THESE ARE STUDIES TO ASSIST IMPLEMENTERS TO DO THINGS IN A BETTER MANNER."<sup>99</sup>

Program manager, Kenya

## **Ensuring use of results**

Disseminating the results of OR studies is a prerequisite to their use. Although OR studies usually include a dissemination plan, there is a need to develop strategies for long-range follow-up after the study has concluded. Financial and human resources also must be allocated for disseminating and using study results.

OR findings are more likely to be used and broadly applied if (1) their policy and program implications are explicitly stated; (2) they are appropriate to the setting; (3) they address issues that policy-makers and program managers can directly manipulate; and (4) funds and an organization are available to support application and expansion of the findings.<sup>100</sup> Successful application requires that program managers and policy-makers be involved from the beginning, that results be accepted by all involved, and that continuing efforts be made to put the research to action.

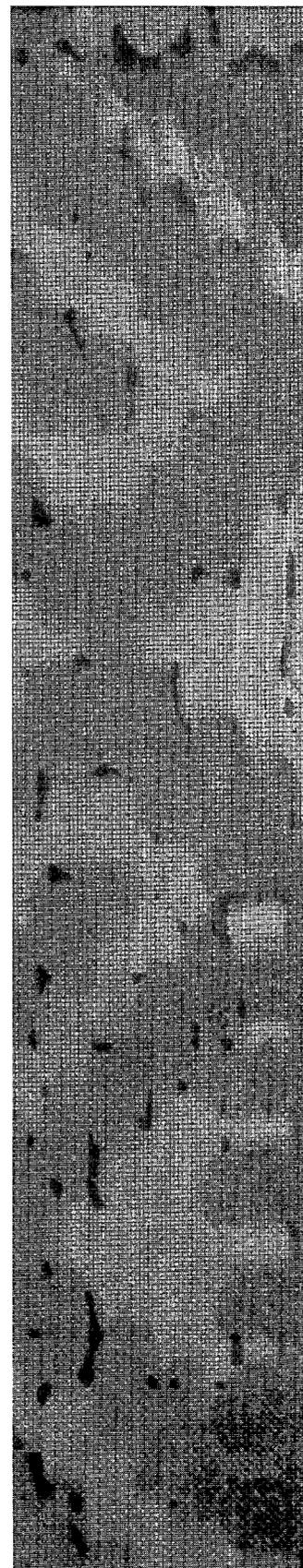
## **Strengthening problem-solving capacity**

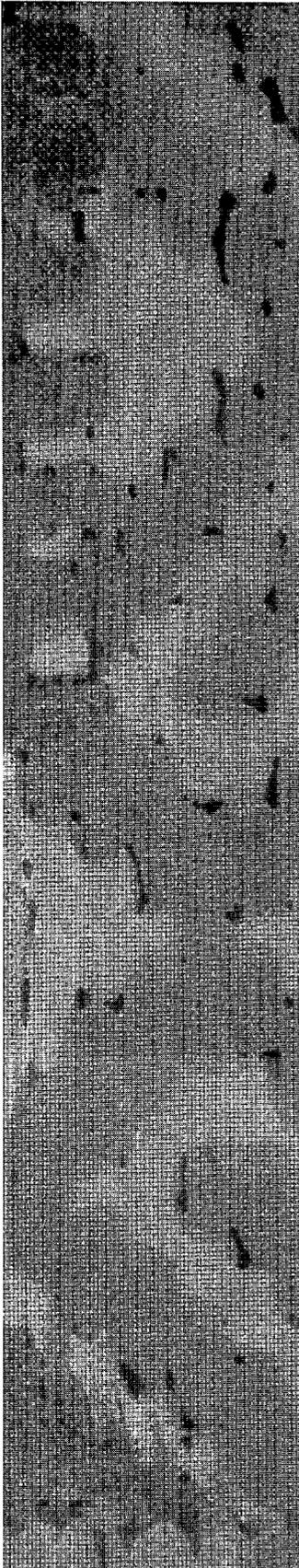
The move to institutionalize operations research often advances at the same pace as the maturing of family planning programs. In part, each influences the other, and both require investment in infrastructure and capacity. There are many models of institutionalization, and most organizations could benefit from an OR problem-solving approach. If OR becomes an established activity dependent on local technical, organizational, and financial resources, its sustainability and continued contributions to program decision-making will be ensured. Researchers can help institutionalize OR by organizing research as a continuous process with full participation of program managers; training managers and researchers in OR methods; designing studies to induce organizational change; encouraging research and service organizations to collaborate; and creating and sustaining the demand for research among policy-makers.<sup>101</sup>

## **Collaboration**

Collaboration between research and service delivery organizations within countries, as well as among donors, is increasingly important. Promoting coordination and information sharing between researchers and service providers will likely lead to the application of research results, thus improving the effective use of program resources. As the gap that exists between researchers and service providers narrows, both groups will benefit from this exchange.

OR will continue to be an important tool for information-based planning and decision-making as the demand for family planning and other reproductive health services increases and as managers strive to provide cost-effective, high-quality services. Today's findings from OR may be setting the stage for tomorrow's cutting-edge innovations in the delivery of services.





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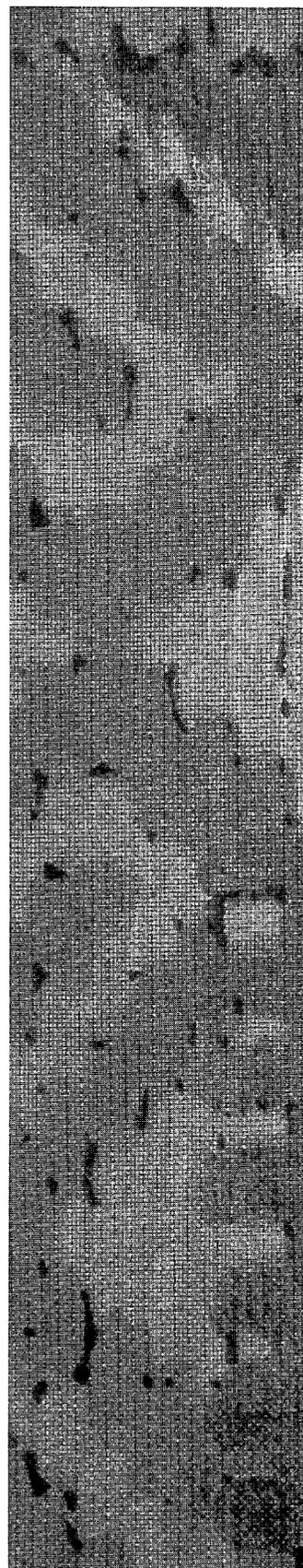
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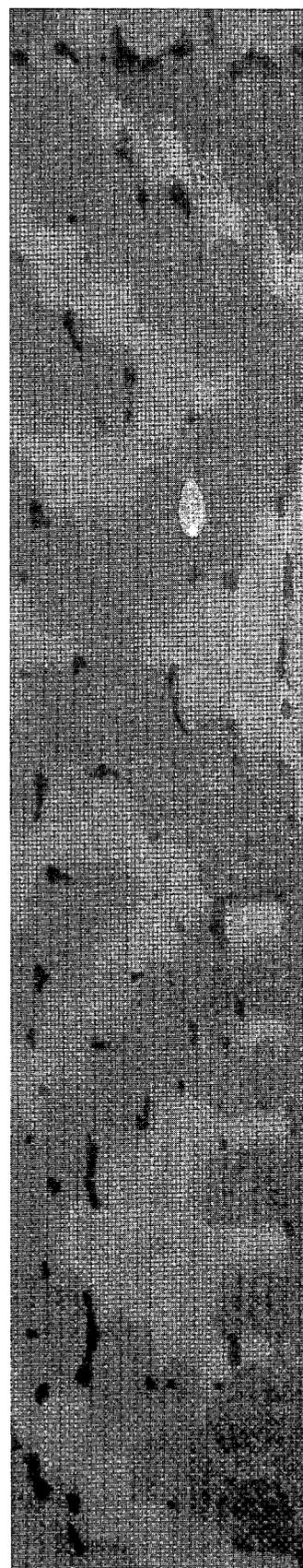
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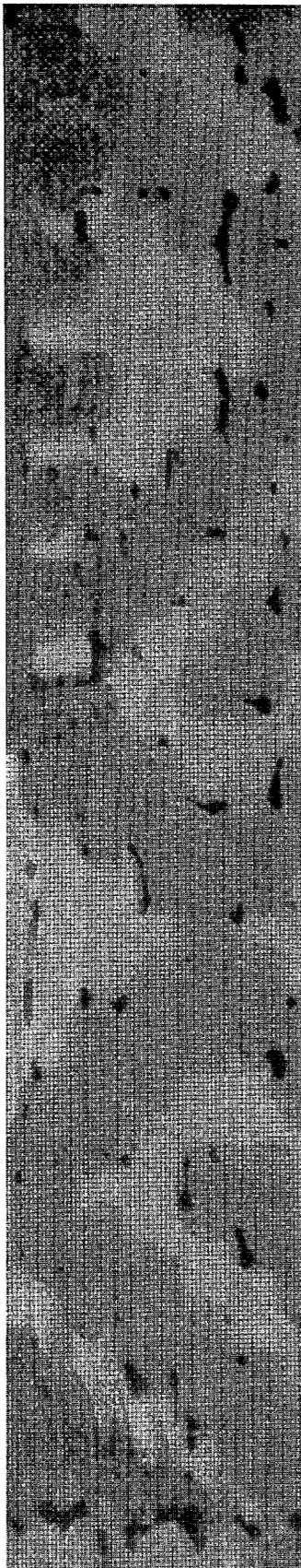
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