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**DISSEMINATING OPERATIONS RESEARCH
FINDINGS THROUGH TRAINING**

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INTRODUCTION

There are numerous ways to disseminate the findings of operations research (OR) on family planning and primary health care programs. Written channels include published and unpublished articles 1/, workshop reports 2/, monographs 3/, newsletters 4/, manuals 5/, working papers 6/, trip reports, quarterly reports, and memoranda. Oral approaches may be combined with written in conferences 7/, symposia, colloquia, seminars 8/, workshops 9/, academic programs, and retreats. Interpersonal communication with advisors and consultants is often employed to disseminate research findings and to assist in their appropriate application and adaptation in new settings. Finally, modern media may be used in the form of films or videotapes of successful service delivery systems. A notable example of this occurred when television coverage of a pilot project of community-based services in Oyo State, Nigeria, led to requests to the university that administered the project for assistance in replicating it within the government health system.

Each of these channels has strengths and weaknesses. It is rare to find an instance of exclusive use of any one, particularly when the objective of dissemination is wider application of the findings. This paper describes a unique opportunity to use multiple channels in a series of training workshops to communicate OR findings and stimulate new projects.

OPERATIONS RESEARCH AND TECHNICAL ASSISTANCE ACTIVITIES

The international program of the Center for Population and Family Health (CPFH) of Columbia University, funded principally by the U.S. Agency for International Development (USAID), focus on improving the delivery of family health and family planning services. Despite the remarkable expansion of family planning programs over the past 20 years, many couples in the Third World still do not have any access to family planning information and services. Furthermore, the majority of pregnant women in rural areas of the Third World deliver their babies at home, without assistance from trained health workers. Their infants and young children have unnecessarily high rates of illness and death due to diseases such as diarrhea, respiratory infection, and malnutrition.

To deliver basic services to these families, programs are needed that break with the Western model of clinic-based care provided exclusively by physicians and other highly trained professionals. Most developing countries do not have the financial or human resources to provide all their people with this level of care. Nevertheless, much can be accomplished through financial and technical assistance to governmental and private agency projects and programs in Africa, Asia, the Caribbean, and Latin America. (Brief descriptions of recent CPFH activities are in Appendix A.)

**CPFH WORKSHOPS IN FAMILY PLANNING, NUTRITION,
AND PRIMARY HEALTH CARE**

In 1980, the Center offered the first annual workshop in family planning, nutrition, and primary health care designed for participants from developing countries. It was stimulated by an evident need for greater attention to program design, management, and evaluation in service delivery in the developing world. The Center's ability to provide training in these areas had grown through involvement in OR and technical assistance activities. Because the Center is a division of the School of Public Health at Columbia University, many staff members had been involved in teaching activities; in fact, some courses had been developed on the basis of international program experience. Over the years, numerous requests had been received from individuals and organizations to arrange ad hoc training programs for key workers. A final important factor was an interested donor agency.

With core support from The Rockefeller Foundation and participant support from many other donors, the Center offered one-month workshops in 1980, 1981, and 1982. These workshops were conducted in New York City in June of each year to teach the underlying principles, practical techniques, and tools for the operation of effective service delivery programs.

Workshop content covered four basis areas:

1. Approaches to the assessment of community needs and resources.
Identification of major fertility, health, and nutrition problems, community and health system resources, and cultural factors relevant to the delivery of services.

2. Selection of program design. Examination of a variety of community-based service models and of links with the formal health system and with other development programs.
3. Review of specific problems and interventions. Examination of the epidemiology of major health, nutrition, and family planning problems, including demographic and ecological considerations, specific interventions available, and alternative information and communications strategies.
4. Management, research and evaluation issues, approaches and methodologies. Discussion of principles of program planning and evaluation, organization design, and management science.

In 1983, continued support for the training program was obtained from USAID. While the objective and content of the workshop were retained, several important modifications were introduced. Consistent with increasing interest and activity in Africa in recent years, the workshop was limited to participants from sub-Saharan African countries. The workshop was offered in both French and English, using simultaneous translation to encourage group participation and foster interchange among trainees. To enable participants to adapt the workshop methods in their own countries, emphasis was placed on training of trainers, and funding was programmed for five follow-up workshops to be held in Africa.

In the first four years, 151 participants from 35 countries attended the New York workshops. By May 1984, an additional 100 to 125 participants had attended follow-up workshops held in Sudan, Kenya, Tanzania, Senegal, and Togo.

The major difference between the New York and the in-country workshops is that the training program and curriculum in the former are built around the wide range of faculty expertise available and, often, a general needs assessment of the field. In the latter, the training is tailored to the host country and institution. It should be noted, however, that in the New York workshop, numerous opportunities exist for meeting particular needs. Trainees are selected in part for the types of programs in which they function and when participants arrive in New York, efforts are made to bring them together with other trainees and faculty with similar interests. Then, small work groups of six to eight people are organized, focusing on specific topics, such as training, supervision, community involvement, and evaluation.

DISSEMINATION OF FINDINGS: NEW YORK WORKSHOPS

Because the Center is involved with OR in varied settings, findings from those projects are included in the curriculum. The principal faculty for the workshop is drawn from two sources: New York-based members of our international staff and CPFH field staff posted as resident advisors in countries where collaborative projects are in process. Together, roughly half of the 151 participants between 1980 and 1983 were selected from countries in which CPFH was involved in a collaborative project, and they often made presentations with faculty based on project experience. These presentations were, in effect, "rapid feedback" from ongoing field efforts to implement innovative health and family planning programs. Much of the material was so new it had not yet been prepared for written presentation. Among

the topics so presented in the New York workshops the following were:

- Use of experienced staff from ongoing programs to assist in the rapid launch of a project extension (Brazil).
- Experience with simple service statistics systems for program monitoring and evaluation, and use of forms designed especially for use by illiterate workers (Sudan and Nigeria).
- Use of routine quarterly supervision with more frequent supervision as needed, as a cost-effective alternative to routine monthly supervision (Brazil).
- Materials developed for use by supervisors to provide rapid feedback on performance to the fieldworkers being supervised (Brazil).
- Approaches used to involve communities and community leaders, such as mayors (Brazil), village helpers (Nigeria), and religious leaders (Sudan).
- Experience with home visiting for provision of services and information in different settings (Haiti, Sudan, Tanzania, Nigeria).
- Experience with integrated versus categorical service delivery (Haiti, Mexico).
- Use of surveys and development of survey models for obtaining baseline information and evaluating project progress (all projects).

- Impact of liberal contraceptive distribution policies in producing higher acceptance and continuation rates (Haiti).
- Impact of paid versus free services and paid versus volunteer workers (Nigeria).
- Approaches to studying cost-effectiveness of programs and program components (Brazil, Sudan, Mexico).
- Findings concerning multiple service outlets showing them to be competitive in some settings and complementary in others (Brazil).
- Experience with locating distributing posts to maximize their effectiveness (Brazil).
- Training approaches used in preparing different levels of workers to perform different groups of tasks (Tanzania, Sudan).
- The importance of phasing in the systematic introduction of interventions (Sudan, Tanzania, Nigeria).
- The use of minisurveys and focus-group techniques in needs and resources assessment, ongoing management, and program evaluation (Thailand, Sudan, Mexico).

In most cases, findings were presented by panels composed of field staff, New York staff, and country project staff. This format facilitated comparison of approaches and findings from different projects.

DISSEMINATION OF FINDINGS: IN-COUNTRY WORKSHOPS

In-country workshops offer similar opportunities for disseminating findings, especially those from projects in the host country. Workshops conducted in the Sudan and Tanzania, both countries with collaborative projects, illustrate this point.

The Sudan workshop was designed to achieve two primary objectives. The first was to present the findings from the collaborative OR project by the University of Khartoum Department of Community Medicine and CPFH to key Ministry of Health officials, provincial health officers, and University faculty prior to its extension into new areas of the Sudan. The second was to demonstrate the capability of the faculty from the Department of Community Medicine (many of whom had been participants in the New York workshops and all of whom were active in the collaborative OR project) to carry out this type of training activity. In Tanzania, the workshop had the similar objective of sharing findings from the collaborative Maasai Rural Health Service Project with central and regional health officers to enable them to select approaches to improve the delivery of primary health care in other areas of the country.

TRAINING AND DEVELOPMENT

We have discussed the New York and in-country training activities as forums for dissemination of findings. The workshops also serve to initiate new projects and to facilitate the development of those that are under way.

The Tanzania project mentioned above began when a Tanzanian participant in the New York workshop requested CPFH assistance in

developing a collaborative OR project. One result of the project was that three Tanzanian staff members attended subsequent New York workshops. This led in turn to the in-country workshop for disseminating project findings.

In a similar fashion, work with the Center for African Family Studies (CAFS) in Kenya, to strengthen its training capability in clinical family planning and management, developed out of an in-country workshop. This workshop was undertaken in part to explore the feasibility of CAFS becoming a major African resource for this type of training. It was designed as a training of trainers in modern contraceptive technology.

In Togo, an in-country workshop will train staff during the first months of a newly designed project. It is likely that principal participants in this workshop will subsequently attend the New York course to further develop their skills in program management and evaluation as well as in the organization and conduct of related in-country workshops.

In the Sudan, the in-country workshop was successful in setting the stage for expansion of the project into other parts of the country. An OR project currently under way in Nile Province is attempting to replicate within the government health service system the success of earlier community-based programs administered by the University. In addition, several workshop participants who function as medical officers within the government health system in other regions of the country have integrated community-based activities within their programs.

In Nigeria, key workers identified as those to be responsible for replication of a project on a statewide basis received training as a team in the New York workshop. This experience is considered to be an important factor in their ability to function as a team in replicating the project.

CONCLUSION

This paper has described the relationships among the training, service, and research activities of CPFH's international program. While each activity has its own strengths, the unique ways in which they are combined can produce true synergy. Research and service activities provide the substance of what is taught. Training activities serve as an important forum for disseminating research findings and identifying new research opportunities as well as a mechanism for expanding and replicating pilot projects.

We believe that the combination of training and program experience is important, and we have described one approach to producing this combination in an institution that operates both types of activities. We would encourage similar institutions to do the same, and we would urge organizations with training programs to explore linkages with organizations that have research, technical assistance, and service programs, to improve the content and relevance of training.

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APPENDIX

Summary descriptions of Recent CPFH International Activities

Bolivia. In Bolivia, CPFH has helped the Center for Social Investigations (CIS) explore the acceptability and feasibility of family planning activities in industrial settings. Programs developed with labor unions provide educational seminars, counseling, and family planning services both at worksites and in a private clinic. A series of training materials has been prepared. CIS will compare the cost of this program to employers with the cost of pregnancy-related employee benefits.

Brazil. From 1974 to 1983, CPFH assisted Sociedade Civil Bem-estar Familiar do Brasil (BEMFAM, one of the world's largest private family planning programs) in the development and expansion of research and evaluation activities. A CPFH resident advisor was assigned to BEMFAM and, in addition to general technical assistance to the central research and evaluation unit, intensive work was done in the northeastern state of Piaui. Activities assisted include a large baseline survey of contraceptive prevalence and operations research testing the effectiveness of household delivery of contraceptives and new patterns of supervision in a community-based program.

Haiti. CPFH's assistance to Haiti's Division of Family Hygiene (DFH) began with a program of door-to-door distribution of contraceptives in three rural communities. The results clearly indicated that household distribution is effective in Haiti. The DHF, with CPFH assistance, then developed a new operations research project that has expanded the involvement of

the community and identified inexpensive and efficient supply mechanisms. The impact of various health interventions and the efficacy of different types of personnel and delivery systems have been tested. A major achievement of the project has been integration of the family planning services with the malaria control community volunteer program. A Center resident advisor provides ongoing research and evaluation assistance to the DFH.

Indonesia. Since 1978, CPFH has provided technical assistance to the National Family Planning Coordinating Board (BKKBN). Four elements of the expanding national family planning program are of particular interest: (1) the extension of mobile family planning services (which have proved successful in rural Bali and Java) to the outer islands; (2) the expansion of postpartum family planning services in the nation's hospitals; (3) the integration of family planning, nutrition and clinic-based delivery of services to urban populations. A CPFH advisor is resident in Indonesia.

Nigeria. Since 1979, CPFH has been assisting one of the first community-based service systems in sub-Saharan Africa. Under the direction of University College Hospital (UCH) of Ibadan, the program brings basic medicines and, for the first time, family planning services to rural villagers. Services are delivered by traditional birth attendants and other community members (most of them illiterate) who work under the supervision of government-trained midwives. CPFH staff have helped develop systems for training, logistics, record-keeping, management and evaluation. This demonstration of a safe, effective and broadly

replicable model for delivery of family health services has encouraged the Oyo State Health Council to expand the project throughout the state.

Sri Lanka. The Family Planning Association of Sri Lanka (FPASL), with CPFH assistance, has built a successful commercial distribution program. Condoms and contraceptive foam are sold in large and small stores of many types throughout the country and the pill is sold in pharmacies and doctor's offices. The FPASL is now improving coverage by adding more retail outlets to its network, and by using trained workers to sell contraceptives in rural areas on commission. The intention is to develop a self-sufficient marketing system.

Sudan. A number of villages along the Nile are now receiving a variety of community-based services, including family planning, oral rehydration, vaccinations, nutrition and maternal child health. The program, designed by the Faculty of Medicine of the University of Khartoum, with assistance from CPFH, employs government-trained (mostly illiterate) village midwives as health workers. Phased introduction of the various program activities, and intensive on-site refresher courses for the midwives are notable features of the project. Successful demonstration that a limited number of health interventions can be provided effectively at the community and household level has led the Ministry of Health to expand this project to other areas of the country. A CPFH advisor and intern are resident in the Sudan.

Tanzania. CPFH began its collaboration with the Evangelical Lutheran Church of Tanzania on its Maasai Health Services Project in 1982. The project employs trained village volunteers to

provide maternal/child health and family planning services to the highly traditional Maasai people. Center staff have assisted in various aspects of the project, including training, supervision, evaluation, and operations research. A CPFH resident advisor is assigned in Tanzania.

Thailand. Since 1976, CPFH has been providing general technical assistance in program research and evaluation to the Family Health Division of Thailand's Ministry of Public Health, primarily through a resident advisor. An improved management information system was developed to provide data for ongoing evaluation, contraceptive prevalence studies, needs and priority assessments, analysis of program strategies, and processing of clinical data. In addition, CPFH has assisted the research efforts of Thailand's innovative private family planning association, the Population Development Association and its subsidiary, Community-based Family Planning Services.

Togo. CPFH staff are collaborating with Togolese Ministry of Social Affairs and the Status of Women on a community-based project which will involve existing rural women's self-help groups in the delivery of nutrition, primary health and family planning services. Besides training in family planning/primary health care, CPFH has provided technical assistance in developing a long-term population assistance strategy appropriate to Togo's policies, needs, and resources.