

primary health care

progress and problems

an analysis of 52 AID-assisted projects

AMERICAN PUBLIC HEALTH ASSOCIATION

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PRIMARY HEALTH CARE: PROGRESS AND PROBLEMS.
An Analysis of 52 AID-Assisted Projects

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At the training school in Omdurman, Sudanese midwives learn all necessary phases of their work, including how to load equipment on the small donkeys they ride. (UNICEF/Aimasy)



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ABBREVIATIONS USED IN THIS REPORT

AID	Agency for International Development
CHW	community health worker*
FP	family planning
MCH	maternal and child health
MOH	ministry of health
PES	Project Evaluation Summary
PHC	primary health care
PID	Project Implementation Document
PP	Project Paper
PVO	private voluntary organization
TBA	traditional birth attendant
VHW	village health worker
WHO	World Health Organization

* This term is used generically in this report for any community-level health worker.

The rhetoric and the reality of the primary health care movement are by no means identical. The ideology and dream of "Health for All by the Year 2000" has been increasingly tempered by implementation realities. Infrastructural, organizational, management, information, logistical, manpower, communication, and financial requirements, as well as the effects of cultural practices and attitudes, alone or in concert, have all been found to impede, retard, or in a few instances facilitate implementation of the PHC dream. There appear to be few magic solutions to most PHC problems encountered. Patient and persistent efforts will be needed to work through and solve new and unexpected problems of PHC implementation. This unglamorous and sometimes vexing process must be endured, however, if PHC is ultimately to prevail as an approach to health care that meets basic human needs and increases social equity.

Unlike the introduction of isolated medical technologies, the introduction of PHC requires changes in national health systems, government ministries, manpower training and educational institutions, and a host of human systems on a national scale. Changes in bureaucracy, chain of command, financial priorities, working style, behavior, and resource allocation are all required. No easy task, I am sure you will agree. The wonder is that the PHC approach has done as well as it has, rather than as poorly as critics allege.

This document identifies some of the problems of the PHC approach as revealed by a review of the first generation of PHC projects supported by the U.S. Agency for International Development (AID). It is the first instance in which a substantial number of primary health care projects supported and assisted by AID have been reviewed and analyzed, with the intention of documenting lessons learned from nearly 10 years of Agency experience with such projects.

Through luck, circumstance, and foresight, AID in the early 1970's began to support a substantial number of low-cost health care delivery projects for rural populations. Many of the principles and initiatives that were incorporated into these projects were later independently identified and articulated in the 1978 Declaration of Alma-Ata, the WHO/UNICEF manifesto by means of which signatories from 114 countries affirmed the value and presumed worth of the primary health care movement as an approach to health care and improvement of the health status

of their peoples. A number of those present at Alma-Ata were beneficiaries of direct experience in implementing AID-supported projects, and contributed their insights during the drafting of the final document.

By 1978 AID had planned or funded in 24 countries low-cost health delivery projects using nonphysician care-givers as first contact providers. More than a dozen of these programs would, in today's thinking, be identified as primary health care projects. The object of commissioning this study and publication, however, was not to make claims concerning paternity or priority for ideas that eventuated in PHC, but rather to share lessons learned from these projects with the wider international health community. AID-assisted activities, such as the Lampang Health Development Project initiated in Thailand in 1974, have been joint ventures with governments, universities, and organizations such as APHA. Participation and counsel from an extended family of individuals and institutions at home and abroad have all contributed to the evolutionary process that has brought us to where we are today with the PHC approach.

The contrast between the ideology of the primary health care movement and field realities presents thoughtful observers with sobering lessons and valuable insights. These lessons and insights must be fed back into second generation PHC projects if we are to continue to "improve the breed." In this spirit we take the risk of sharing with a wider community some of the lessons we have learned in the process of supporting early efforts. This is done with the knowledge that when many of us have looked through our "retrospectoscopes," many findings will be seen as self-evident.

The present study, notwithstanding limitations frankly acknowledged by the authors and the Agency, represents a seminal work. To our knowledge nothing of the kind yet exists in the literature in a single document. We believe it will be of value for many years to a wide readership of people who are confronted with the problems of PHC in their daily work.

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A health worker in the Solomon Islands weighs a baby to monitor his growth. (UNICEF/Watson)



foreword

A mere four years have passed since the endorsement of "Health for All by the Year 2000" and the Alma-Ata accords which propelled primary health care to worldwide attention as a unifying development theme. In this relatively brief span of time, significant changes have occurred both nationally and internationally. In particular, it has become almost universally accepted that the benefits of introducing modern health technology to developing countries will not "trickle down" to benefit the rural and poorer populations unless the entire health delivery system and pattern of resource allocation is altered. This new attitude has resulted in a departure from the historical approach of investing the major portion of health funds in developing countries in hospitals and medical personnel located primarily in urban centers.

This document chronicles the problems and progress in 52 AID-funded projects in primary health care, many of which began before Alma-Ata. The diversity and scope of these projects demonstrate the wide range of approaches to PHC. It is still impossible to assess the implications of these approaches; the timeframe has been far too short. However, evidence of progress made provides a convincing rationale to sustain PHC efforts as an alternative to historical approaches of health care delivery. It can be demonstrated that the PHC approach:

- has global support. Assistance programs—multilateral, bilateral, and private—have a common goal and an approach which is more coordinated and congruent than ever before.
- has permanently changed the manpower mix for health services delivery from physician to non-physician dependence, and from a fixed-based facility to a community-based system.
- has begun to change medical education, both by altering its focus to include community medicine and by providing more thorough training in common health and environmental problems.
- has stimulated countries to move toward international financial mechanisms.
- has expanded the utilization of traditional practitioners, and, in some places, incorporated them into the formal health delivery system.

- has provided a framework through which categorical disease programs can be implemented.
- has provided the impetus for the development and utilization of appropriate technologies such as oral rehydration.
- has motivated donors and recipient governments to look at health interventions from the point of the intended beneficiary rather than that of the professional medical community.
- has placed a greater emphasis on multi-sectoral planning, permitting governments to view health as a total investment in human capital rather than as a categorical program activity.
- has legitimized the prevention of disease and the promotion of health as an integral component of national development.

Now that the philosophical framework has been accepted and the above-mentioned accomplishments achieved, a second generation of activities and approaches must be pursued.

It is hoped that this analysis of major problems encountered by programs currently financed by the Agency for International Development will contribute to a refinement of the approaches which are required. The reader should not become discouraged by the lengthy list of obstacles encountered and noted in the following chapters. Such obstacles and problems go hand in hand with challenging the established order and posing the possibility for far-reaching changes. Indeed, if the progress during the next few years in operationalizing matches the progress made during the last few years in conceptualizing primary health care, the goal of "Health for All by the Year 2000" will have advanced and a significant contribution to development and the well-being of people everywhere will be under way.

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Washington, D.C.
July 1982

Mothers and their babies wait for medical attention at a hospital in southern India. (UNICEF/T.S. Satyan)



introduction

This review identifies areas of progress and problems encountered in the integrated health programs that are being carried out with assistance from the United States Agency for International Development (AID). It also suggests ways in which primary health care (PHC) projects can be modified and improved.

The study is based on the 52 AID-assisted primary health care projects described in *AID-Assisted Primary Health Care Projects: Summary Reviews* (see Table 1, page 00). The synopses, prepared between June 1980 and January 1981, outline the projects' goals, strategies, and implementation history. They are based on documents available in Washington, D.C., and information obtained in interviews with persons familiar with the projects. Although the method of research did not permit the kind of comprehensive, in-depth examination of critical issues that is possible in field-conducted case studies, it did enable the authors to identify common patterns of experience.

Objectives of this Report

The PHC strategy has been used with considerable success in small-scale projects, but implementation strategies are still being tested and assessed both regionally and nationally. Thus, a major goal of this analysis was to examine the experience of large-scale rural PHC projects. The report is concerned primarily with community-based PHC services. The other levels of the tiered PHC system, as well as programs of expanded immunization and water and sanitation efforts—other components typical of PHC programs—are discussed only as they relate to and are integrated with community-based health activities. Specifically, the objectives of the report are to:

- review AID's 52 projects to provide insights into their problems, strengths, and potential;
- identify and discuss the major issues in PHC, based on the findings of this analysis; and
- make specific recommendations on possible adjustments in program direction to ensure greater impact.

Project Review Procedure

Although all the projects have evaluation components, few have been in operation long enough to have produced data that show the projects' impact on morbidity and mortality. Consequently, impact could not be used as the sole basis for review. Even

for those projects which have data on health improvement, it is not generally possible to attribute the measured changes to a PHC services delivery strategy (e.g., use of community health workers to deliver services at the community level) or to a specific intervention or package of services, because changes are being introduced into each of these project components simultaneously. Alone, any one of them could have an impact on health.

In few of the projects was a controlled test of program components planned, because such research is expensive and difficult technically. The lack of this control presented difficulties in obtaining solid information with which to determine the impact of the community health component—the newest and most innovative addition to the programs, and the focus of the AID projects. Because of these and other data limitations, an analysis of the projects was undertaken based on non-quantitative project information. The analysis covered areas of special interest to agencies and governments which are planning and implementing PHC projects: community participation; health workers; management; costs and financing; impact and progress; and AID design and administration procedures.

Throughout this analysis, an effort was made to examine the projects from a number of viewpoints. Attention is given to the particular PHC approach being used, the stage of implementation, each project's scale, and, to a lesser extent, the region where each project is being undertaken. As much as possible, general PHC issues, problems, and prospects are distinguished from those more closely tied to the operating procedures of AID. Because most of these projects are being implemented by ministries of health, however, it was rarely possible to differentiate between specific problems of projects and general administrative and operational procedures of host governments.

Although the conclusions reached must be tentative, because many of the projects are in an early stage of implementation, and available information was sometimes incomplete, it is hoped that the findings, hypotheses, and recommendations will add to the store of knowledge about primary health care and thus improve future programming. The Office of Health of AID welcomes comments on this study and the project summaries on which it is based, as well as additional information on the projects they described.

TABLE 1 PROJECT NAMES AND ABBREVIATIONS

<i>Abbreviations</i>	<i>Project Name</i>
ASIA Indonesia/VFP-MCW	Indonesia/Village Family Planning Mother-Child Welfare
Korea/KHDI	Korea/Health Demonstration Project
Nepal/FP-MCH	Nepal/Family Planning-Maternal and Child Health
Nepal/Integrated	Nepal/Integrated Community Health Services
Pakistan/BHS	Pakistan/Basic Health Services
Philippines/Bicol	Philippines/Bicol Integrated Health, Nutrition and Population
Philippines/PUSH	Philippines/Panay Unified Services for Health
Thailand/Lampang	Thailand/Lampang Health Development Project
Thailand/20 Province	Thailand/Rural Health Care Expansion
LATIN AMERICA Bolivia/Montero	Bolivia/Rural Health Delivery Services
Bolivia/Chiquitos	Bolivia/Mobile Health Program, Chiquitos Vicariate
Bolivia/RHDS	Bolivia/Rural Health Delivery System
Dominican Republic/Health Sector	Dominican Republic/Health Sector Loans I and II
El Salvador/RHA	El Salvador/Rural Health Aides
Guatemala/RHS	Guatemala/Rural Health Services Program, Loans I, II, and III
Guatemala/PRINAPS	Guatemala/Rural Health Promoter Training Research
Guatemala/SINAPS	Guatemala/Integrated System of Nutrition and Primary Health Care
Guyana/RHS	Guyana/Rural Health Systems
Haiti/SHS	Haiti/Strengthening Health Services II
Haiti/MCH-FP	Haiti/Maternal-Child Health/Family Planning II
Haiti/RHDS	Haiti/Rural Health Delivery System
Honduras/Integrated	Honduras/Integrated Rural Health Services
Jamaica/Children	Jamaica/Health Improvement of Young Children
Nicaragua/PRACS	Nicaragua/Rural Community Health Services
Nicaragua/Rural Health	Nicaragua/Rural Health Institutional Development
Nicaragua/East Coast	Nicaragua/East Coast Health Delivery
Panama/RHDS	Panama/Rural Health Delivery System
Peru/Extension	Peru/Extension of Integrated Primary Health
Peru/ORDE-ICA	Peru/ORDE-ICA Health Region Maternal-Child Health and Population
AFRICA Botswana/HSD	Botswana/Health Services Development
CAR/Ouhara	Central African Republic/Ouhara Province Rural Health
CWA/SHDS	Central and West Africa/Strengthening of Health Delivery in Central and West Africa
Kenya/Kibwezi	Kenya/Kibwezi Rural Health Scheme
Kenya/Kitui	Kenya/Kitui Primary Health Care
Lesotho/RHD	Lesotho/Rural Health Development
Mali/Yelimane-Koro	Mali/Rural Health Services Development
Mauritania/Trarza	Mauritania/Rural Medical Assistance
Niger/Diffa	Niger/Basic Health Services Delivery
Niger/RHI	Niger/Rural Health Improvement
Senegal/Sine Saloum	Senegal/Rural Health Services Development
Sudan/Northern	Sudan/Northern Sudan Primary Health Care
Sudan/Southern	Sudan/Southern Sudan Primary Health Care
Swaziland/RWBDC	Swaziland/Rural Water-Borne Disease Control
Swaziland/HMT	Swaziland/Health Manpower Training
Tanzania/Hanang	Tanzania/Hanang Ujamaa Village Public Health Program
Tanzania/School Health	Tanzania/School Health Program
Zaire/HSD	Zaire/Health Systems Development
NEAR EAST Afghanistan/BHS	Afghanistan/Basic Health Services
Egypt/SHDS	Egypt/Strengthening Health Delivery Systems
Egypt/Urban	Egypt/Urban Health Delivery System
Tunisia/RCH	Tunisia/Rural Community Health
Yemen/Tihama	Yemen Arab Republic/Tihama Primary Health Care

findings, issues, and recommendations

Nearly 80% of the population of countries which receive assistance from the United States Agency for International Development (AID) live beyond the effective reach of modern health services.¹ Lacking adequate care and exposed to widespread disease, infection, and malnutrition, this group, and particularly infants and children, continue to experience high mortality and morbidity.

Over the past decade, international donors and third world governments have come to recognize that existing health delivery systems and national health policies are inadequate and need to be changed radically to make basic health care more widely available so that the health of rural people can be improved. Lowering infant mortality rates and decreasing illness and fatalities from preventable and controllable diseases are crucial. Accordingly, governments and international funding agencies are committing themselves increasingly to the concept of primary health care (PHC) and are implementing programs to increase access to health care in rural areas.

The term "primary health care" has been used to describe many different programs to extend basic health services to unserved populations. In recent years, it has become synonymous with the concepts and principles articulated in 1978 at Alma-Ata, U.S.S.R., by representatives of the World Health Organization (WHO). The Declaration of Alma-Ata which resulted from the conference does not advocate any one strategy to extend health services; it does, however, emphasize a set of major principles, chief among which are the following:

- Existing inequalities in the health status of people are unacceptable. Society must be organized to serve all people.
- Essential health care is to be made available to all people.
- Communities have a critical role to play in improving their own health; they should be actively involved in the design, implementation, and financing of health programs.
- Coordination with other sectors is critical, because many improvements in health depend on economic and social development.
- It is essential that the programs be affordable.
- A minimum range of basic health services is to be made

available at the village level, and these should emphasize preventive measures.

- The national health system must be modified to support primary health care by providing both adequate supportive services and access to more complex care when needed.
- Health care at the village level should be provided by persons from the community.

As was recommended at Alma-Ata, PHC should include certain basic health services, including "education concerning prevailing health problems and the methods of identifying, preventing, and controlling them; promotion of food supply and proper nutrition; an adequate supply of safe water and basic sanitation; maternal and child health care, including family planning; immunization against the major infectious diseases; prevention and control of locally endemic disease; appropriate treatment of common diseases and injuries; promotion of mental health; and provision of essential drugs."² These health activities often are categorized as curative, preventive, and promotive services. Traditionally, many of these services have been provided by ministries of health, but often only in cities and larger towns.

AID Support of Primary Health Care

The Agency for International Development is strongly committed to primary health care. More than one-half of the 52 AID-assisted projects reviewed for this study had begun implementation before the Declaration of Alma-Ata focused the world's attention on the need to develop strategies to extend PHC to unserved populations. Since the early 1970s, the Agency has been shifting its emphasis from vertical programs, curative services, and physician-training to the extension of low-cost, integrated rural health delivery systems that use paraprofessionals. Simultaneously, it has been continuing to support expanded immunization programs, water and sanitation projects, and efforts to strengthen health delivery systems generally. In fiscal year 1980, PHC projects were allocated \$84.6 million, compared to \$27.5 million in 1976.³ The projects reviewed in this document reflect AID's commitment to locally-based health care and community-level services.

¹Agency for International Development, Office of Health, *Health Sector Policy Paper*, Washington, D.C., March 1980.

²WHO AND UNICEF, International Conference on Primary Health Care, Alma-Ata, U.S.S.R., September 6-12, 1978, WHO, *Conference Report*, Geneva, 1978.

³AID, Office of Health, Washington, D.C., January 1982.

Some Common Features of AID-Assisted PHC Programs

The primary health care systems that most governments have begun to develop are complex. They comprise numerous components, the more common of which are:

- The establishment of peripheral, community-based health services which are financed, in part, by local resources. A key feature of community-based services is the use of a community health worker (CHW) who has been trained to provide basic curative and preventive care, and of a village health committee charged with initiating health-related activities and financing certain aspects of community health care.
- The strengthening of the existing health service delivery system to make higher levels of care accessible to referrals from CHWs and to provide needed support and supervision to community-level workers.
- The strengthening or expansion of immunization programs to ensure timely and thorough immunization of target groups.
- The development, where financially feasible, of village schemes to provide sanitation infrastructure and potable water.

The development of community health activities, which are shaped by community members, delivered by community members, and partly financed by beneficiaries is the most innovative component of the AID-assisted PHC programs reviewed here and an essential part of their design.

The 52 projects examined in this report are located in 33 developing countries in Asia, Africa, Latin America, and the Near East. Approximately one-third are national-level efforts; one-half are regional efforts of varying sizes; and the remainder consist of small-scale pilot efforts. (Table 2 on page 24 contains basic information about the projects described in this report.)

All the projects have as their primary goal the provision of low-cost health services to heretofore poorly served or unserved rural communities. To reach this objective, the projects plan to explore ways to motivate community members to take care of their own health needs and to encourage them to help identify and resolve their problems; build or strengthen community institutions to carry out rural programs, using local resources to reduce operating costs; train new cadres of paraprofessional and community health workers; integrate health service delivery; and strengthen the institutional capacity of governments to support rural programs.

GENERAL PROGRAM PROGRESS

Few impact data on the 52 projects are available at this time, but the information from the longer-running projects generally is positive. Changes in the health status of the target populations in the Nepal/Integrated and Thailand/Lampang projects have been measured; improvements have been modest. Egypt/SHDS has lowered infant mortality rates by half in test villages by using oral rehydration therapy; Kenya/Kitui has reported reductions in infant mortality rates; and Panama/RHDS has registered decreases in the incidence of diarrhea, parasites, and typhoid in areas where safe water and excreta disposal systems have been built.

For the few projects for which data are available on such immediate goals as use of services and extension of coverage, improvements have been reported in immunization coverage and numbers of family planning acceptors, women receiving prenatal care, and persons receiving care at health facilities. Changes such as these are attributed frequently to the efforts of CHWs, a characteristic feature of community-based health programs.

Project outputs, although uncertain predictors of health improvements, are the most commonly available measures of progress in providing community-based health care. The indications are that many projects have been successful in setting up a primary health care structure and that accessibility to modern health care has improved for populations that live within project areas. Many new facilities are in place; the skills of health workers have been upgraded; new categories of paraprofessionals have been trained; and sizable numbers of community health workers have been trained and deployed.

In addition to these measurable, tangible indicators of progress, there is evidence that a number of projects have been instrumental in effecting positive changes in government attitudes toward extending health coverage. In some countries where governments have been sensitized to the need for expanded services, a variety of changes have occurred. For example, there have been changes in health resource allocations and priorities, with the result that people outside the urban areas, who traditionally have received few government health services, are now receiving attention. In some countries, an increased share of the national budget is being allocated to the health sector. Laws are being changed to permit non-physicians to provide curative care and dispense drugs. And new legislation is being enacted to permit the government to recover some of the cost of providing health services by charging users for services and drugs. Projects also are being expanded and used as models for national programs.

SUMMARY OF MAJOR FINDINGS AND ISSUES

The 52 AID-assisted PHC projects are testing strategies to extend health services to unserved populations of varying sizes. Until the mid-1970s, the PHC programs which received support from AID were primarily small demonstration or experimental research projects, such as the Narangwal project in India and the Danfa project in Ghana.¹ The projects reviewed in this document represent some of the earliest efforts by international donors to move to large-scale, community-based programs. Evaluations and progress reports indicate that although progress has been made in some areas, numerous implementation difficulties remain in these new projects. In most projects, these problems have been identified, and efforts are under way to find appropriate solutions. The following section summarizes major findings about the implementation of the AID-supported PHC projects, and raises a number of issues for program planners to address. These are issues about the PHC strategy and its application which derive from the analysis of findings.

Support Services

Providing essential support services (supervision, drugs, transportation, community organization work, etc.) to numerous and scattered health service points—characteristic of community-based programs—has been the major problem of the projects. Although governments have little difficulty completing such start-up activities as health post construction and CHW training, actual service delivery often flounders from lack of adequate support services. Government management capabilities generally are weak to begin with, since in many countries the administering agency for the PHC project has too few trained management personnel. It is evident that many PHC projects are expanding too fast for support services to keep pace. Even a regional project can substantially increase the requirements for support. For example, the Thailand/20 Province project created 5,000 new CHWs, representing an equal number of individual new locations—all in rural areas. The nationwide Niger/RHI project must oversee 20,000 service delivery agents in approximately 10,000 rural locations, some of which are accessible only by mule or camel.

Limited national funding is another cause of management problems. The deteriorating economic situation in many countries has affected the governments' ability to adequately fund drugs, fuel, and other recurrent program costs. In Nepal, for example, the government usually can afford to purchase only a three-month supply of drugs for its field workers each year. Delays and difficulties in obtaining host-country funds frequently hinder projects' abilities to undertake planned activities. Supervisory field trips

(involving per diems, gasoline, and vehicles) and inservice training are especially vulnerable to cutbacks in funding.

In most countries, the PHC programs are being implemented through a highly centralized administrative structure, and decentralization and other necessary administrative reforms are taking place slowly. Projects such as the Dominican Republic/Health Sector are finding it difficult to implement planned administrative reforms because of institutional resistance. Also, projects often are hampered by the lack of basic infrastructure in the rural areas to which health services are being extended. Roads are poor, communication with the central government is difficult, and sometimes the banking and other facilities that support personnel do not exist.

The design of PHC programs, which emphasizes numerous service points at the periphery, makes them extremely dependent on good, cheap ground transportation and gasoline for supervision and drug distribution. Traditionally, however, dependence on vehicles has posed problems for ministries of health, because of poor maintenance systems, poor road conditions, and difficult geographic and climatic conditions. Such problems are augmented as PHC programs increase their demands on the system. Furthermore, rising fuel costs make it particularly difficult for governments to finance transportation. Kenya, Sudan, Mali, and the Central African Republic, for example, have all indicated that they cannot afford to maintain the vehicles and fuel required to operate the PHC programs as planned. To overcome transportation problems, some projects are training mechanics, setting up garages, and experimenting with less fuel-dependent means of transport. Improvements have been reported in keeping vehicles on the road, but the difficulty of meeting the foreign exchange costs of fuel continues to constrain the projects.

Poor systems to manage and supply drugs in most countries constitute a serious impediment to PHC projects. The credibility of community health workers depends on the availability of drugs; without regular supplies, community use of health services declines. In the pilot project for Afghanistan/BHS, for example, use of health services tripled when drugs were available. To date, progress in improving the availability of drugs has been slow. The lack of trained personnel, inefficient logistics systems, and transportation problems continue to impede efforts.

Many projects have been unable to provide adequate supervision to community health workers. This lack of supervision has affected the quality of care provided, and has led to high attrition rates and extra training costs. Some projects have also found that infrequent supervision leads to loss of community confidence in the health workers, which leads to decreased demand for services, because supervision is the workers' only evident link to outside expertise. A few projects are experimenting with strategies to improve supervision. The use of two-way radio, group meetings, and mid-level workers with supervisory functions as a prime responsibility is being tested. (See Chapter V for further discussion of support services.)

¹The Lampang project in Thailand, begun in 1975, was AID's first large-scale PHC project. It is included in this review.

ISSUE: What is the capacity of governments to manage and support PHC programs?

It is evident from the projects reviewed that progress is slow, and that 5-10 years may be needed to bring about even modest improvements in management capability. How can PHC programs best adjust to this reality? By slowing down the pace of expansion? By building up support capability *before* beginning service delivery? By providing to governments additional, and more effective, management assistance?

The projects studied vary in the amount of attention they give to the development of host-country support capability; therefore, there is room for increased AID assistance in this area. The projects employ two basic approaches to developing institutional capability: training host-country personnel and providing technical advisory services. The longer-running projects give evidence that several years of such assistance result in limited improvement in a government's ability to deliver services. It is not clear, however, whether culturally appropriate Western management solutions are being applied, whether technical assistance is being provided efficaciously, or whether training is relevant.

ISSUE: How can PHC projects be simplified and made more manageable?

With their thousands of separate delivery points, the PHC programs described in this report are inherently difficult to manage and support. Experimentation is essential to determine if certain packages or mixes of services are more easily supported than others, and what combination of facility extension and use of community health workers at the periphery will be most cost effective for management and health improvement. Unquestionably, the PHC goal of "health for all" is desirable for all countries, but each country needs to assess realistically what configuration of facilities and CHWs it can support.

Costs and Government Financing

This study yielded little evidence to indicate whether the stated goal of the AID-assisted programs to provide low-cost, affordable health care is being achieved. The few data on costs range from U.S.\$0.50 to U.S.\$15.40 per capita per year for recurrent program costs. Data on individual program components (e.g., the cost of providing community-based services) are not available; consequently, it is difficult to compare the costs of PHC projects to the costs of more traditional strategies to extend health coverage.

Lack of experience in identifying required program activities and their costs has, in many cases, resulted in underestimated program costs. Both AID and ministries of health need more field experience in implementing PHC projects to understand better how much funding is required to develop and sustain such critical program components as supervision, community participation, and drug supply. (See Chapter VI for a further discussion of program costs.)

Community Participation and Financing

The planned role of community participation varies considerably in the projects studied, indicating that different governments assign different degrees of emphasis to this program strategy. Most of the projects, however, have sought participation to undertake community-wide environmental and health-improvement activities, including water and sanitation efforts; to finance certain program costs; and to provide volunteers to deliver services to the community. To provide an organizational framework to stimulate participation, approximately three-fourths of the projects have created special community health committees; the remaining programs use existing community groups.

Overall, results have been mixed. Communities have collaborated with project-initiated activities, by selecting CHWs, forming community health committees, constructing health posts, and providing labor to build water systems. These activities tend to be specific and one-time efforts. Activities to improve the availability of water have been the most effective in mobilizing community support. Activities which require community identification and resolution of health problems and a sustained commitment have made little headway. Only six projects—all small-scale—report positive results in community-instigated health-improvement activities.

Important strides have been made in getting communities to finance drugs, which traditionally have constituted a sizable share of the recurrent costs of ministries of health. It has been more difficult to obtain community support for the salaries of CHWs—the other item that programs most frequently have sought to finance with community resources. Twenty-eight projects have sought to mobilize sufficient resources to provide acceptable incentives, but none has been able to do so (in the other projects CHWs receive a government salary). The most commonly employed financing mechanism is profits from drug sales. The 10 projects that use this method have found that the proceeds are inadequate and irregular. Furthermore, the system encourages CHWs to concentrate on curative care.

Community health committees often atrophy after initial organization is completed. In general they have not been an effective mechanism for stimulating community participation. The committees usually have a single purpose, and generally they do not reflect existing religious, political or other social groupings. It is not apparent whether the multipurpose groups used by some projects—usually development committees or village-level political organizations—are more effective.

Many factors have been identified to explain the generally low level of community participation. Foremost among these is the vagueness of project plans to foster and monitor community participation. Also, too little time and money and too few human resources are allocated to organize communities and sustain and support them. Another factor is that the *raison d'être* for the program comes from outside the community, and its members have little

say about the shape of the project. Communities may feel no strong need for the PHC programs that are being offered, because their curative needs already are being met through established channels, and they do not place a high priority on the preventive services which the programs introduce. Where governments fear active communities or where communities are suspicious of government programs because of poor previous experiences, active community involvement is further constrained. Also, most ministries of health lack experience in organizing communities, and bureaucratic procedures may impede efforts to allow activities to proceed at a different pace in individual villages. (See Chapter III for a further discussion of community participation and financing.)

ISSUE: How essential is community participation to achieving improvements in health status?

The difficult question remains as to what role community participation should play in PHC schemes. For, although participation is important for reasons of equity, its value in improving health is not clear from the projects reviewed. However, available evidence suggests most ministries of health do not have the ability (financial or organizational) to undertake the dual task of delivering health services and mobilizing communities for more than routine program-support activities.

ISSUE: Can vigorous participation in primary health care programs be expected in most societies?

The concept of voluntary participation in government-sponsored projects is not widespread in traditional societies. Most, if not all, societies undertake communal activities, but often these efforts occur solely within the traditional, extended family, caste, tribal, or religious framework. Secular voluntarism frequently is associated with political reform (e.g., socialism) and with societies with slightly higher standards of living. The difficulty of involving communities should not be underestimated. Nevertheless, as the findings from the projects suggest, but do not prove, modification of the way participation is promoted and organized can lead to a higher level of participation than is presently in evidence.

ISSUE: How equitable is community financing?

In many countries, persons in rural areas are being asked to help finance PHC programs, while those in urban areas continue to have access to free care. In most of the programs examined, villagers must pay for drugs, and in approximately one-half of the projects communities must pay the CHW. If the income base of the rural areas continues to erode, as it is doing now because the share of agriculture in national income production is shrinking in most countries, asking communities to pay for their health care will become increasingly inequitable.

Community Health Workers

Training villagers to provide their communities with basic health services is a common strategy of PHC programs aimed at providing culturally appropriate and affordable services. The strategy is based on the fact that the most common rural health problems can be treated by someone with brief training. The CHW is key to efforts to extend health services to rural areas.

Projects report no difficulty in recruiting and training large numbers of CHWs. However, the quality of their work, their popular credibility, and the relevance of their training to community-perceived needs have yet to be widely assessed. The few existing studies of quality reflect the need for more inservice training and supervision. Evidence of CHWs' credibility is limited and inconclusive, but the information suggests that communities are willing to overcome skepticism in return for ready access to drugs and curative care. Projects frequently report that CHWs' credibility suffers when drug supplies are irregular.

CHWs are trained to undertake a large variety of promotive, preventive, and curative tasks, but they perform only a limited number, and generally they concentrate on curative care. Community financing schemes, especially those that tie CHW compensation directly to drug sales, tend to reinforce this pattern, because they rely on services for which people have demonstrated a willingness to pay. In contrast, this study found that government-salaried CHWs are more likely to maintain a preventive and promotive emphasis. In such instances, there is less dependence on community demand; and the programs frequently assign CHWs primarily preventive and promotive duties and depend upon home visits to deliver the services.

Remunerating CHWs has been problematic. On the one hand, payment of regular government salaries creates a substantial cost burden that many of the countries find difficult to sustain. On the other hand, the expectation that CHWs will work as volunteers has proven unrealistic in most cases. The 28 projects seeking community support for CHWs are all working on ways to provide cash or in-kind compensation of some type. Attrition among CHWs is affected by inadequate compensation. Studies of attrition rates from six projects suggest that attrition rates among CHWs who depend on community financing are approximately twice the rates of CHWs who receive a fixed government salary.

Community use of CHWs varies considerably from project to project, with CHWs in Afghanistan/BHS seeing 60-100 patients per month and those in Thailand/Lampang reporting approximately 30 contacts per month.

Project staff generally establish selection criteria for CHWs, although in approximately 75% of the projects the communities make the actual selection. Considerable experience has been accumulated to guide programmers in selecting appropriate criteria for their program. Literacy and sex of the worker have the most serious implications for the quality of person recruited, attrition rates, and the type of health services delivered. (See Chapter IV for a further discussion of community health workers.)

ISSUE: *How can PHC programs balance community-perceived needs with needs determined by health professionals?*

This is one of the central programming issues PHC programs must address. To obtain a community's financial support for PHC activities, a project must respond to community-perceived needs and provide the services that the community wants. The experience of the projects reviewed shows that communities will pay only for what they perceive as useful: generally, drugs and curative care (sometimes for water and clinic buildings). Also, program evidence shows that the credibility of CHWs is highly dependent on the workers' curative role. In most poor countries, preventive health care is still a low priority. Its benefits are not perceived immediately. The more pressing needs for food, water, shelter, and relief from sickness take precedence. Health services that promise only long-term, delayed benefits may be difficult to establish in subsistence economies. There is often little incentive to expend time, energy, and money on care when benefits are poorly understood. For PHC programs to become established—to develop credibility and financial support—governments will have to respect the strong demand for curative care. Seeking creative ways to introduce preventive services and minimize the duplication of curative services which the private sector already provides is a challenge that PHC projects must face.

ISSUE: *How can the credibility of community healthworkers be ensured?*

Generally, CHWs are young, their educational level is low, their initial training is brief, and, once in the field, they often lack the drugs and supervision they need. Because of these factors, CHWs may suffer from a lack of credibility. In many societies, old age is respected. Also, most societies put a premium on education and professional training, even though these may be beyond reach. Therefore, CHWs may not be the community's preferred choice of personnel to provide essential health care. Nevertheless, in communities where no alternative source of modern medicine is available, CHWs, even with their brief training, are likely to be called upon to deal with medical emergencies and illnesses. If these health workers are adequately supported with drugs and supervision, they are likely to gradually overcome community skepticism through service to the community, continued contact with villagers, and additional experience.

Program Evaluation

All the projects have evaluation components. Data on implementation activities (project outputs) are available for many of the projects, and can be expected for all the projects in the near future. Data on service utilization (process data) were identified and obtained for only a few projects, because many of the programs are relatively new, because the information systems designed to produce the data are

not functioning adequately, and because data may be available in the field but not be disseminated in project reports and evaluations. The third and most important category of evaluation data, which indicates the impact of the PHC projects on health status, is limited, although most of the projects plan to measure impact. Most of the projects are still too new for changes in health status to be expected. Also, PHC projects, as all health projects, face difficulties in obtaining reliable data, and in attributing measured changes in health status to the program.

Most of the impact evaluations consist of surveys conducted before and after a project to measure key health indicators. Only a few projects, for example, Niger/RHI and Nepal/Integrated, use more limited, but focused, longitudinal studies. Despite efforts to simplify them, evaluations and information systems remain overly complex. Also, because projects are service-oriented, efforts to collect baseline and subsequent data frequently are given low priority by the executing agencies of government. In Pakistan/BHS and Niger/RHI, for example, baseline studies were not carried out until two to three years after the program had begun. In other programs, Peru/ORDE-ICA, for example, the baseline data are more complex than necessary for project evaluation, although suitable for research purposes.

ISSUE: *Can the evaluations planned for in most of the projects provide information on the effectiveness of the PHC model?*

PHC programs consist of various components (e.g., introduction of CHWs, strengthening of the traditional health delivery system, expanded programs of immunization, and improvement of community water supplies). Because these components are all part of the same program, and because vertical programs (e.g., malaria and family planning) frequently are implemented in a project area, it is rarely possible to identify the effects of introducing peripheral, community-based services—the newest and most distinctive component of PHC programs. Suppose, for example, that data indicate that the percentage of children vaccinated has increased sharply. Would the increase be attributable to the use of the community-based component, or would it be the result of executing a standard vaccination campaign well? If improved sanitation and well construction were undertaken and achieved, would the result reflect on the broad PHC approach or would it simply be the success of one activity which is but a part of a broader strategy?

AID Project Design and Management

Implementation problems in a number of projects can be traced to poor design. Projects originate under a variety of circumstances. For example, some projects were initiated as much for political as for technical reasons; the Senegal/Sine Saloum project started as a large-scale, regional effort, without the benefit of a pilot project; and the Bolivia/RHD project was initiated before the Montero pilot project had been evaluated. Relatively few of the 52 projects were de-

signed based on recommendations from a comprehensive health sector assessment. Lack of attention to a country's cultural and political realities has also caused problems (e.g., Zaire/HDS and Pakistan/BHS), as has location of the sites where basic transport and communication infrastructure do not exist (e.g., Mali/Yelimane-Koro).

In most cases, these kinds of problems arose because host-country participation in the planning and design of projects was minimal. Also, the pre-project planning process involves several steps, and these often are carried out by short-term consultants who can not provide continuity and who lack the familiarity with the country that is required.

Other problems in some project designs include inflated project targets and unrealistic project schedules: Almost every project runs behind schedule and cannot achieve its stated goals in the three years usually planned. Delays are common at every stage, but they appear most often during start-up activities; for example, during recruitment of technical assistance teams, during host governments' efforts to meet conditions precedent to loan disbursement, during periods when vehicles and other commodities are arriving in-country, and during construction of facilities and training of field personnel. The Dominican Republic/Health Sector project was three years behind schedule; in Korea/KHDI, it took more than three years to deploy the first paramedic, and in Honduras/Integrated, there was a two-year delay in constructing training centers. Overestimation of potential achievements and underestimation of time required to complete activities result in either the distortion of a project's objectives or the extension of the project. Although AID's detailed planning procedures would seem to obviate basic design problems, it appears that these procedures are often followed pro forma, and that potential problems, such as institutional weaknesses of host-country agencies, are glossed over. In part, this is because designers work under a series of political constraints imposed by the U.S. Congress, AID, and the host countries.

During project implementation, AID monitoring of projects is sometimes lax, in part because bureaucratic incentives motivate field staff to pay more attention to developing new projects than to monitoring active projects. A variety of conflicts arises among AID missions, long-term assistance teams, and host governments. The subject of dispute may be the need to modify project design decisions, or the emphasis given to institution-building. Some technical assistance teams feel that they are locked into design decisions with which they disagree. Project designers do not always incorporate sufficient mechanisms to facilitate the transfer of skills and management capabilities during implementation. Some host governments, however, are not seriously interested in institution-building. Furthermore, external factors beyond AID's control—war, civil unrest, the overthrow of governments, and changes in key government officials—play major roles in impeding progress, as they have in more than a dozen of the 52 projects studied (e.g., Afghanistan/BHS and the three Guatemala projects).

RECOMMENDATIONS

A series of broad recommendations, based on the findings and conclusions presented in this report, has been prepared. The recommendations are summarized below under headings that correspond to the principal issues and concerns addressed in this report.

Management and Support Problems

1. Fewer services in the early period of implementation should be provided to enhance the likelihood that interventions can be delivered and will be successful. Specific, well-defined PHC projects with limited goals and objectives and selected interventions of proven effectiveness have the best chance of becoming established and of effecting improvements in health.
2. Program experimentation should be undertaken to help identify effective clusters of services that PHC programs can deliver and later augment. In an experimental activity, it is possible to address a variety of pertinent questions, for example, should a PHC program begin by controlling malaria, measles, and infant diarrhea, or should it monitor child growth and provide immunizations?
3. Training programs that are funded as part of a project should give special attention to management and planning. This focus is required in short-term training workshops as well as in longer-term programs. Where trainees are sponsored for high levels of training in third countries or in the U.S., consideration should be given to training in business and public administration rather than public health.
4. The establishment of global management training facilities should be considered, perhaps in collaboration with other donor agencies and governments. AID could play a primary role in coordinating a cooperative project to set up regional training centers, or other training networks, in the host countries.
5. To reduce the burdens on governments of supplying, operating, and maintaining costly vehicles, more programs should experiment with the use of private sector distribution systems for moving drugs and other supplies.
6. Projects seem to share many of the same implementation problems. Therefore, during the planning phase, particular attention should be given to those areas that are most problematic. These are management, logistics and other support services, community participation, community financing, and national financing.
7. Emphasis should be given to accelerating the pace at which management improvements take place. It may be necessary to devise management systems that are more appropriate for developing countries and to improve the way that technical expertise and skills are transferred.

Cost and Government Financing

8. During project planning, more rigorous financial analysis should be undertaken, both to estimate a project's operating costs and to evaluate the government's capacity to absorb these costs once AID assistance is terminated.
9. Project evaluations should include a thorough cost analysis. The analysis is critical to efforts to develop a more accurate data base of fixed and operating costs of PHC projects. It also is useful in identifying more accurately all the activities which must be funded for effective program implementation.
10. Cost data on individual PHC components, services, and service delivery strategies are essential and should be provided to programmers to enable them to choose the most cost-effective options.

Community Financing

11. Community financing schemes should be thoroughly studied before being applied, so that realistic assumptions can be made about the amount of money that will be generated. Solid information on demand for and potential use of services and studies on price elasticity and expenditure patterns, which will be useful in establishing levels of fees, will be needed and should be developed.
12. More information should be collected to help identify the services that communities are willing to pay for, and to determine whether full or partial cost recovery can be expected.

Community Participation

13. An effort should be made to establish more conclusively whether or not community participation is critical for the success of PHC programs in improving health and sustaining improvements. It is also important to identify those elements of PHC for which participation is most essential.
14. Projects seeking to establish community participation should plan and budget more carefully for this activity. Although participation in PHC programs is a relatively new concept, the experience of existing projects, as well as information on more than three decades of experience from community development programs, can be carefully studied and applied. It is apparent that PHC programs require a more sustained effort from personnel, as well as increased funding, to motivate communities to become involved and to assume responsibility for their own health care.
15. Guidelines on community participation should be prepared. AID's policy on this issue should be defined, and the ways to organize communities and promote and maintain participation should be described.
16. Project evaluations should examine community participation. Specific indicators should be developed to measure progress in this area.

Community Health Workers

17. Priority should be given to efforts to obtain information to assess how the CHW strategy is working. At this time there is a lack of information on tasks that CHWs actually perform, the level of demand for CHWs' services, the quality of care that CHWs provide, the CHWs' credibility within the community, and CHWs' accessibility to all segments of the community.
18. Programs that depend on the community to finance CHWs should consider using existing health care agents to deliver PHC services, both to minimize duplication of private sector services and to reduce program costs. Most communities have established traditional health care providers, such as *curanderos*, herbalists, and injectionists; some large communities also have pharmacists. These persons already provide curative care (which is critical to obtaining community support), are self-sufficient, and are accepted as credible sources of care. Therefore, it may be advantageous for governments to experiment with upgrading the curative skills of these health care agents, training them to deliver preventive care and providing whatever financial support they need to deliver preventive services.
19. More inservice training and supervision are needed to improve CHW performance. An effort should be made to determine the minimum staffing patterns that would be required to undertake this function and to compare the effectiveness of the various strategies being used to provide supervision.

Preventive Services

20. Educational efforts, including systematic use of mass media, should be stepped up to generate support for the efforts of CHWs and other health care agents and to increase the community's receptivity to preventive medicine.
21. Programs seeking community financial support should adopt new strategies, concentrating first on the establishment of curative care and those preventive services in high demand, and then gradually introducing a wider range of preventive services. Governments could give CHWs (or traditional practitioners) more intensive training in curative care, and drop all but a few selected preventive services in the early stages. Accepted preventive interventions whose benefits are perceived immediately could be emphasized. If these steps were taken, the quality of the remaining services could be expected to improve, as would popular interest and support of the health care program. Once support for curative services is established firmly, and the community begins to recognize the value of CHWs, a variety of preventive measures could be introduced. This strategy does imply duplication of the curative services now being provided in the private sector. Indeed, some duplication may be unavoidable.

Evaluation

22. AID project evaluations (the Project Evaluation Summary, or PES) should focus on quality of outputs, not on quantity alone.
23. Simple ways to measure the impact that PHC projects have on health should continue to be explored.
24. Priority should be given to simplifying the evaluation and information systems designed for PHC projects.

Program Design

25. Greater flexibility should be built into both project implementation plans and budgets, so that deficiencies in design and approach can be corrected as they appear. More mechanisms are needed to alter a project's course and to correct design inadequacies as they appear. Procedures exist to modify AID-funded projects, but they are cumbersome and do not encourage the kind of flexibility that is required. It is essential that other means be found to make early and mid-course corrections. Also, it is important to build in mechanisms for regular review and replanning. Consideration should also be given to providing sector loans for health to help meet a broad range of general goals rather than funding more specific projects and activities.
26. The three years often planned for projects is not sufficient time to adequately educate and involve communities, to phase in services, to improve management capabilities, or to otherwise follow strategies that have proven to be effective in operational PHC programs. Options should be tested on how to extend the time projects have to reach their goals. Greater use might be made of measures such as "non-funded extensions," and projects might be phased in over a number of years and be funded in sequential segments.
27. Host-country participation in all stages of project design is essential in order to make project plans more appropriate and to increase political support for them.
28. Mid-level government officials at both the central and regional levels should be encouraged to participate in activities. Their involvement is important to the maintenance of political support for a project's goals and approach, particularly where there is political instability, and changes in top-level officials occur frequently.
29. More rigorous criteria for initiating a project should be established. Ideally, before a large regional or national project is funded, a comprehensive health sector assessment and pilot project should be undertaken.
30. Experience in choosing sites demonstrates problems in locating a pilot or demonstration project in the most remote, inaccessible areas of a country. In selecting a site, the presence or absence of basic transportation and a communication infrastructure should be observed, because the lack of either can reduce visibility and contact with the central government's implementing agency.

31. Various steps in pre-project planning and design require continuity and familiarity with the country. Short-term consultants should not have prime responsibility for design.
32. Projects should be monitored closely to ensure that implementation problems are identified early.
33. The respective monitoring roles of the AID mission, AID/Washington, the technical assistance teams, and the host governments, should be defined more clearly.
34. The practice of establishing offices for AID contractor personnel and technical advisors that are physically separate from those of the MOH (or other implementing agency) should be evaluated carefully to determine whether it facilitates or impedes contact with government counterparts and helps to achieve the long-term objectives of building institutional capability.

Mother and child in Dakar, Senegal. (ILO)



Selected by his own community, a community health volunteer in India gives first aid, distributes simple medicines, treats most ailments, and helps in early detection of TB, leprosy, and other diseases. (UNICEF/T.S. Nagarajan)



general description of projects

The 52 projects reviewed in this report were selected by staff of the American Public Health Association (APHA), with the help of health specialists in the Agency for International Development's (AID's) four regional bureaus, from a preliminary list drawn from congressional presentations and annual budget submissions. At the time of the selection (May-September 1980), the sample included all active AID-funded primary health care (PHC) projects. To be included in the sample, a project had to have as its goal the extension of health services to unserved populations; be in operation or have been concluded recently; use auxiliary health workers or community health volunteers (CHVs); and provide integrated basic health services.

The 52 projects reviewed were classified and examined according to a number of variables, including primary health care approach; scale of operations, or size of population in the project area; state of project implementation; and range of services provided at the most peripheral level. (See Table 2 on page 24 for a list of the projects and their characteristics.)

Approaches to Primary Health Care

All the projects follow one of two major approaches to extending access to primary health care: community-based or facility-based. Most of the projects are community-based and focus on the delivery of services by members of the community. The projects that use this approach can be subdivided into those that depend on volunteers to provide health services and those in which community members are paid a government salary. Three projects use a more conventional, facility-based delivery mechanism (Tunisia/RCH, Egypt/SHDS, and Egypt/Urban). This classification is intended to highlight differences in the programs and to emphasize the implications of those differences. For the few projects which have elements common to both approaches, the one most emphasized has been used. (See Table 3.)

Community-based projects may use either volunteers from the community or government-salaried workers. In projects using volunteers, health workers at the most peripheral level usually are selected and financed by the village. The community plays a planned and pivotal role in the 28 projects included in this group. Some of the countries that use community-supported village workers are Tanzania, Afghanistan, Kenya, Nicaragua, and Niger.

In the other kind of community-based project, the community health workers (CHWs) receive a government salary. Members of the community are trained and paid to provide health services in their villages. They form a new level of personnel in the official government health deliv-

ery structure. In this category of projects, the community's role is much smaller than that in the preceding category. There are 18 projects in this group, including those in the Sudan, the Dominican Republic, Nepal, and the Philippines.

Egypt and Tunisia, which use a facility-based approach, have chosen to concentrate on extending their health infrastructure and introducing new categories of auxiliary personnel to help bridge the cultural gap between service providers and recipients. There are no immediate plans either to use CHWs in these projects or to provide services directly at the village level. Community participation in the provision and financing of health care is minimal.

Location

Of the 52 projects, 9 are in Asia; 20 are in Latin America; 18 are in Africa; and 5 are in the Near East. (See Table 2.) Some countries have two AID-assisted PHC projects, including Nepal, the Philippines, Thailand, Kenya, Niger, Sudan, Swaziland, Tanzania, Peru, and Egypt. Bolivia, Nicaragua, Guatemala, and Haiti each have three projects. The projects are located in the following countries, grouped by region:

- **Asia:** Indonesia, Korea, Nepal, Pakistan, Philippines, and Thailand;
- **Latin America:** Bolivia, Dominican Republic, El Salvador, Guatemala, Guyana, Haiti, Honduras, Jamaica, Nicaragua, Panama, and Peru;
- **Africa:** Botswana, Central African Republic, Kenya, Lesotho, Mali, Mauritania, Niger, Senegal, Sudan, Swaziland, Tanzania, and Zaire;
- **Near East:** Afghanistan, Egypt, Tunisia, and Yemen Arab Republic.

Scale

The projects examined in this report range from national efforts to small pilot, or demonstration, programs. As Table 4 shows, 20 are national in scope; 12 are regional projects designed to reach from 500,000 to 18 million people; 10 are smaller, regional projects with populations ranging from 100,000 to 500,000; and 7 are small-scale experimental projects designed to cover fewer than 100,000 people. The remaining 3 projects provide general institutional support to government PHC programs and have no field component. This range provides perspective on the role of project size in the type and severity of implementation problems encountered. (See Table 4 for size of population living in the project area.)

In classifying the projects according to scale, the planned scope of operation was used, rather than actual coverage,

TABLE 2 PROJECT CHARACTERISTICS

<i>Projects by Region and Country</i>	<i>Type of Project</i>	<i>Number of People in Project Area</i>	<i>Major Contractor or Grant Recipient</i>	<i>Planned AID Funding (In Millions)</i>	<i>Funding Period</i>
ASIA					
Indonesia/VFP-MCW	Regional	18.8 million	None	\$10.0	1980-1985
Korea/KHDI	Pilot	250,000	None	\$ 5.0	1975-1980
Nepal/FP-MCH	National	14 million	Westinghouse Health Systems; U. of California at Berkeley	\$ 6.7	1968-1980
Nepal/Integrated	National	14 million	Management Sciences for Health	\$ 2.6	1973-1980
Pakistan/BHS	National	28 million (50% of rural population)	U. of Hawaii	\$ 8.5	1977-1981
Philippines/Bicol	Regional	400,000	None	\$ 2.5	1979-1985
Philippines/PUSH	Regional	600,000	None	\$ 5.7	1978-1982
Thailand/Lampang	Regional Demonstration	600,000	U. of Hawaii	\$ 8.2	1974-1982
Thailand/20 Province	Regional	18 million	None	\$ 5.5	1979-1982
LATIN AMERICA					
Bolivia/Montero	Pilot	35,000	Several personal service contractors	\$ 0.9	1975-1981
Bolivia/Chiquitos	Pilot	100,000	Catholic Relief Services (PVO)	\$ 0.1	1978-1980
Bolivia/RHDS	Regional	651,000 (3 of 9 de- partments)	Not Selected	\$13.0	1979-1984
Dominican Republic/ Health Sector	National	2.1 million	Several personal service contractors	\$12.8	1975-1981
El Salvador/RHA	National	300,000 rural	None	\$ 0.7	1978-1981
Guatemala/RHS	National	4 million rural	None	\$ 5.9	1971-1979
Guatemala/PRINAPS	Pilot	150,000	None	\$ 0.4	1979-1982
Guatemala/SINAPS	Pilot	70,000	Institute of Nutrition of Central America and Panama	\$ 1.1	1979-1981
Guyana/RHS	National	900,000	U. of Hawaii	\$ 4.7	1979-1981
Haiti/SHS	Institutional Development	—	Westinghouse Health Systems	\$ 7.5	1977-1982
Haiti/MCH-FP	National	5.8 million	None	\$ 3.9	1978-1981
Haiti/RHDS	National	5.8 million	Management Sciences for Health	\$16.0	1979-1983
Honduras/Integrated	National	2 million rural	Management Sciences for Health	\$ 1.3	1976-1981
Jamaica/Children	National	2.2 million	Johns Hopkins U.	\$ 0.4	1976-1978
Nicaragua/PRACS	Regional	61,500	None	\$ 0.4	1976-1980
Nicaragua/Rural Health	Regional	163,000	None	\$ 5.5	1976-1980
Nicaragua/East Coast	Regional	35,000	Wisconsin/Nicaragua Partners (PVO)	\$ 0.2	1977-1980
Panama/RHDS	National	150,000 rural	None	\$ 9.5	1976-1981
Peru/Extension	National	17.6 million	Management Sciences for Health	\$ 7.2	1979-1981
Peru/ORDE-ICA	Regional	650,000	Management Sciences for Health	\$ 1.8	1980-1982
NEAR EAST					
Afghanistan/BHS	Pilot	830,000	Management Sciences for Health; U. of California at Santa Cruz	\$ 4.3	1976-1979
Egypt/SHDS	Regional	2 million	Westinghouse Health Systems	\$ 8.5	1978-1983
Egypt/Urban	Pilot	1.7 million	Westinghouse Health Systems	\$25.3	1979-1985
Tunisia/RCH	Regional	4 provinces	University Research Corpora- tion	\$ 7.6	1978-1984
Yemen/Tihama	Regional	800,000	Catholic Relief Services (PVO)	\$11.4	1980-1985

<i>Projects by Region and Country</i>	<i>Type of Project</i>	<i>Number of People in Project Area</i>	<i>Major Contractor or Grant Recipient</i>	<i>Planned AID Funding (in Millions)</i>	<i>Funding Period</i>
AFRICA					
Botswana/HSD	National	800,000	Medical Service Consultants	\$ 5.5	1978-1983
CAR/Ouham	Regional	350,000	None	\$ 1.7	1977-1979
Central and West Africa/SHDS	Institutional Development	—	Boston U.	\$20.0	1977-1982
Kenya/Kibwazi	Pilot	100,000	African Medical Research Foundation (Pro)	\$ 0.8	1979-1981
Kenya/Kitui	Regional	230,000	Coordination in Development	\$ 0.4	1979-1981
Lesotho/RHD	National	1.3 million	U. of Hawaii	\$ 3.2	1979-1983
Mali/Yellmane-Koro	Pilot	60,000	Harvard Institute of International Development (HIID)	\$ 3.9	1979-1983
Mauritania/Trarza	Regional	190,000	Dimpex Associates	\$ 1.7	1979-1983
Niger/Diffa	Regional	152,000	Africare (PVO)	\$ 1.5	1978-1981
Niger/RHI	National	5.5 million	Africare (PVO)	\$14.0	1978-1983
Senegal/Sine Saloum	Regional	800,000	None	\$ 3.3	1977-1980
Sudan/Northern	National	10 million (estimated)	Medical Service Consultants	\$ 5.8	1979-1982
Sudan/Southern	National	3-4 million (estimated)	African Medical Research Foundation (PVO)	\$ 3.2	1979-1983
Swaziland/RWBDC	National	600,000	Academy for Educational Development	\$ 3.3	1980-1985
Swaziland/HMT	Institutional Development	—	Medical Service Consultants	\$ 4.3	1977-1982
Tanzania/School Health	National	3 million	CODEL (PVO); Development Associates	\$ 5.7	1980-1983
Tanzania/Hanang	Pilot	200,000	John Snow Public Health Group	\$ 0.5	1977-1981
Zaire/HSD	Pilot	Small pilot areas	Planning and Human Systems	\$ 0.7	1978-1980

because the framework of operation was considered of paramount importance in reviewing the projects' implementation experience. Also, estimates of coverage (planned and actual) are not always given in project planning documents, and they are of limited value in characterizing projects that regularly expand their coverage and modify geographic boundaries. The difference between planned scope of operation and actual coverage does not appear to be great for the small- and medium-scale projects, but it is great for some national-scale projects.

Of the 18 national projects, approximately one-half are currently operating nationwide, with activities in all regions. These are located in Niger, the Dominican Republic, Jamaica, Guyana, Botswana, Lesotho, and Sudan (both the Northern Region and Southern Region). The remaining projects in the national category are still expanding coverage, region by region. Nepal and Haiti, for example, have national implementation plans for PHC, and the different regions of the country are being phased in gradually. By 1980, Nepal had extended coverage of services in 48 of the 75 districts; Haiti had increased coverage in approximately one-half of the country.

In addition to these 18 projects, two smaller projects located in Guatemala and Panama are integral parts of national PHC implementation efforts. Sometimes smaller projects are planned as an integral part of a larger regional or multi-regional government program. For example, the Indonesia/VFP-MCW program is supported by AID in

7,500 villages and by the United Nations Children's Fund (UNICEF) in 39,000 villages. By 1984, two-thirds of Indonesia's villages will be covered by the government program.

In discussing the scale of the AID-assisted PHC projects, it is important to bear in mind that, in most countries, AID is only one of many donors supporting PHC programs. National-scale projects almost always involve multi-donor support.

Stage of Implementation

The projects described in this report are in various stages of implementation. Approximately 60% were initiated before 1979. Because one or more years of start-up activities typically are required to recruit technical advisers, train health workers, and construct facilities, many of the 52 projects have begun to deliver services at the village level only within the last one or two years.

A number of projects have long implementation histories. The most notable are Korea/KHDI (1975), Guatemala/RHS (1971), Thailand/Lampang (1974), Bolivia/Montero (1975), Honduras/Integrated (1976), Nepal/MCH-FP (1968), and Dominican Republic/Health Sector (1975). The first five use volunteer CHWs, and the last two employ government-salaried CHWs. Other projects, such as Niger/RHI (1978), Jamaica/Children (1976), and El Salvador/RHA (1978), represent expansions of programs that have been under way since the mid-1960s, under either government

TABLE 3 PROJECTS CLASSIFIED BY PRIMARY HEALTH CARE APPROACH¹

Community Volunteer Approach		
Afghanistan/BHS	Kenya/Kitui	Niger/Diffa
Bolivia/Montero	Kenya/Kibwezi	Niger/RHI
Bolivia/RHDS	Korea/KHDI	Pakistan/BHS
Bolivia/Chiquitos	Mali/Yelimane-Koro	Peru/Extension
CAR/Ouham	Mauritania/Trarza	Peru/ORDE-ICA
Guatemala/RHIS	Nicaragua/PRACS	Senegal/Sine Saloum
Guatemala/SINAPS	Nicaragua/Rural Health	Thailand/Lampang
Guatemala/PRINAPS	Nicaragua/East Coast	Thailand/20 Province
Honduras/Integrated		Zaire/HSD
Indonesia/VFP-MCW		
Government Paraprofessional Approach		
Botswana/HSD	Jamaica/Children	Sudan/Southern
Dominican Republic/Health Sector	Lesotho/RHD	Sudan/Northern
El Salvador/RHA	Nepal/FP-MCH	Swaziland/RWBDC
Guyana/RHS	Nepal/Integrated	Tanzania/School Health
Haiti/MCH-FP	Panama/RHDS	Yemen/Tihama
Haiti/RHDS	Philippines/PUSH	
	Philippines/Bicol	
Facilities Extension Approach		
Egypt/SHDS	Egypt/Urban	Tunisia/RCH

¹Non-service delivery projects (Central and West Africa/SHDS, Haiti/SHS, and Swaziland/HMT) are not classified.

TABLE 4 PROJECTS CLASSIFIED BY SIZE OF POPULATION COVERED¹

1. National²		
Botswana/HSD	Lesotho/RHD	Sudan/Northern
Dominican Republic/Health Sector	Nepal/FP-MCH	Sudan/Southern
El Salvador/RHA	Nepal/Integrated	Swaziland/RWBDC
Guatemala/RHS	Niger/RHI	Tanzania/School Health
Guyana/RHS	Pakistan/BHS	
Haiti/MCH-FP	Panama/RHDS	
Haiti/RHDS	Peru/Extension	
Honduras/Integrated		
Jamaica/Children		
2. Large-Scale Regional (2-18 million)		
Egypt/SHDS	Indonesia/VFP-MCW	Thailand/20 Province
Egypt/Urban		
3. Medium-Scale Regional (500,000-1 million)³		
Afghanistan/BHS	Peru/ORDE-ICA	Thailand/Lampang
Bolivia/RHDS	Philippines/PUSH	Tunisia/RCH
	Senegal/Sine Saloum	Yemen/Tihama
4. Small-Scale Regional (100,000-500,000)		
CAR/Ouham	Mali/Yelimane-Koro	Philippines/Bicol
Guatemala/PRINAPS	Mauritania/Trarza	Tanzania/Hanang
Kenya/Kitui	Nicaragua/Rural Health ¹	
Korea/KHDI	Niger/Diffa ¹	
5. Small-Scale (under 100,000)		
Bolivia/Montero	Guatemala/SINAPS	Nicaragua/East Coast
Bolivia/Chiquitos	Kenya/Kibwezi	Zaire/HSD
	Nicaragua/PRACS	

¹Non-service delivery projects (Central and West Africa/SHDS, Haiti/SHS, and Swaziland/HMT) are not classified.

²These projects have activities in all regions but may be serving only selected groups of people.

³Only the service delivery portion. Parts of loans were for national institutional development.

TABLE 5 PROJECTS CLASSIFIED BY FIRST YEAR OF FUNDING

1968-1971		
Guatemala/RHS	Nepal/FP-MCH	
1972-1975		
Bolivia/Montero Dominican Republic/Health Sector	Korea/KHDI	Nepal/Integrated Thailand/Lampang
1976-1978		
Afghanistan/BHS Bolivia/Chiquitos Botswana/HSD CAR/Ouham Central and West Africa/SHDS Egypt/SHDS El Salvador/RHA	Haiti/SHS Haiti/MCH-FP Honduras/Integrated Jamaica/Children Nicaragua/PRACS Nicaragua/Rural Health Nicaragua/East Coast Niger/Diffa Niger/RHI	Pakistan/BHS Panama/RHDS Philippines/PUSH Senegal/Sine Saïoum Swaziland/HMT Tanzania/Hanang Tunisia/RCH Zaire/HSD
1979-1980		
Bolivia/RHDS Egypt/Urban Guatemala/PRINAPS Guatemala/SINAPS Guyana/RHS Haiti/RHDS Indonesia/VFP-MCW	Kenya/Kibwezi Kenya/Kitui Lesotho/RHD Mali/Yelimane-Koro Mauritania/Trarza Peru/Extension Peru/ORDE-ICA	Philippines/Bicol Sudan/Northern Sudan/Southern Swaziland/RWBDC Tanzania/School Health Thailand/20 Province Yemen/Tihama

or other (non-AID) auspices. The longer running projects provide a needed perspective on the function of time in resolving implementation problems. (A classification of projects by scheduled date of initiation is presented in Table 5.)

Range of Services at Peripheral Level

One of the objectives of PHC is to make essential health services available to everyone. The consensus of the signatories of the "Declaration of Alma-Ata" was that, although basic services will vary from country to country, they will include a certain core. The eight essential services outlined at Alma-Ata can be categorized as promotive, curative, and preventive. Under these general headings fall the following specific core activities:

1. Curative Services

- Appropriate treatment of common diseases and injuries;
- Provision of essential drugs.

2. Promotive Services

- Public education in the recognition, prevention, and control of prevailing health problems;
- Promotion of adequate food and nutrition.

3. Preventive Services

- Maternal and child health and family planning (MCH/FP);
- Immunizations against major infectious diseases;
- Prevention and control of locally endemic diseases;
- Provision of safe water and basic sanitation.

The projects that were reviewed vary greatly in the num-

ber of services they plan to provide.¹ Most cover a range of curative, promotive and preventive services, although CHWs in Indonesia/VFP-MCW and Korea/KHDI seem to be limited to the provision of preventive services, such as nutrition and family planning. Overall, the 52 programs are planned to be strongly preventive. The majority of projects have been designed to provide simple curative care, offer MCH services, monitor nutritional status, and provide immunizations, although less than one-third have plans to provide safe water supplies. (See Table 7 for a list of services provided by CHWs in each project.) In analyzing planned services, it is well to keep two facts in mind. One, PHC programs are only one of many Ministry of Health (MOH) programs, and vertical programs may well operate side by side with them. Many years may be required before existing categorical (vertical) programs are integrated into PHC; in the interim, similar or overlapping services may co-exist. Two, although a large range of services is planned in most PHC projects, evaluations reveal that many such services are not being provided at this time.

Experimental Strategies

Many of the 52 projects are experimenting with ways to overcome implementation difficulties. Of particular interest are the following experiments.

- **Local Financing.** In Mauritania/Trarza, communities must develop, as a precondition for participation in the program, a viable financing plan to pay CHWs.

¹A checklist of services was prepared for each of the projects. This is available upon request.

● **Drug Distribution.** The Thailand/Lampang project is experimenting with the use of a commercial pharmaceutical supplier to provide drugs to village-level health workers to determine whether organizations specializing in drug distribution are more efficient than the MOH in undertaking this function.

● **Drug Costs.** Nepal has introduced inexpensive Ayurvedic (non-Western) medicines into the government health system in an effort to reduce program costs.

● **Drug Supplies.** A number of programs, including the Philippines/PUSH and Bicol projects, have established village-level pharmacies that are stocked with a range of basic drugs. The objective is to make drugs more easily and cheaply available in rural areas.

● **Use of Private Health Care Providers.** The Egypt/SHDS, Thailand/Lampang, and Korea/KHDI projects are training pharmacists in an effort to upgrade the diagnostic and prescriptive skills of these widely-used private sector health care agents. The Egypt project is testing their effectiveness as distributors of oral rehydration packets.

● **Supervision.** Two-way radio is being used to motivate and supervise CHWs in Guyana/RHS, Nicaragua/East Coast, Lesotho/RHD, and Mauritania/Trarza. Senegal/Sine Saloum has used open broadcasts for this purpose.

● **Phasing of Curative-Preventive Care.** The Mali/Yelimane-Koro project has been designed to establish services at the CHW level before preventive services are introduced.

● **Evaluation.** Rather than use large, cross-sectional baseline and follow-up surveys covering numerous health indicators, the Nepal/FP-MCH project is undertaking disease-specific longitudinal surveys to measure project impact.

● **Experimental Areas.** The Korea/KHDI project, in three districts of the country, is testing strategies and technologies for the rest of the country.

● **Flexible Project Design.** In the Afghanistan/BHS project, which had a particularly flexible design, the project administrators were able to experiment with various alternatives for service delivery, logistics, information systems, and other program activities, and to select the most functional methods for wide-scale use.

● **Community Participation.** The Panama/RHDS project has achieved considerable participation through the use of the effective and active community health committees that have been established nationwide since 1970. These committees have focused on water, sanitation, and nutrition projects. The small-scale Kenya/Kibwezi project also gives special attention to community participation. The project has programmed considerable contact with the community, involving villages in most project activities.

● **Mass-Media Support.** The Nicaragua/PRACS project and Swaziland/RWBDC include a comprehensive mass media education component to support interpersonal educational efforts of CHWs and other health personnel.

A doctor in Benin discusses a number of health problems with community elders and asks for their help in the control of epidemics. (WHO/7099/P. Almasy)



community participation

Community participation is an important element of primary health care (PHC). To have an impact on such common problems as intestinal parasites, communicable infections, and poor childhood nutrition, the PHC projects plan to stimulate group health-improvement activities and effect community-wide behavioral changes. The provision of health services alone is not expected to resolve the complex health issues being addressed. Moreover, many of the primary health care programs depend, at least in part, on communities for financial and organizational support.

Community financial support of PHC programs is particularly critical. Few governments in the developing world can afford to extend health care to the 80%¹ of the population who traditionally have lived outside the area to which modern medical services are delivered, without reallocating health budgets, and without securing contributions from the community. Community support in the form of salaries for community health workers (CHWs) and payment for drugs could cover significant portions of a program's recurrent costs. In Mauritania/Trarza, for example, local financing of these items is planned to cover one-third of recurrent costs. Drug costs alone commonly account for 40%² of Ministry of Health (MOH) budgets.

After examining the forms of participation commonly elicited from communities, this chapter examines the progress that is being made and the factors that commonly inhibit participation.

EXPECTATIONS AND PROGRESS

Expected Forms of Participation

The planned role of community participation varies considerably, indicating that governments assign different degrees of emphasis to this aspect of projects. Projects initiated since Alma-Ata have tended to give more prominence to this component. Although there is variation among projects, participation expected from the communities commonly takes one of three forms: helping organize a project, contributing financial support, or actually carrying out health-improvement activities. Examples of the kinds of participation that projects commonly seek are:

1. Organization

- Provide volunteers to serve as CHWs.
- Select community health workers.
- Organize and support village health committees.

¹Agency for International Development, Office of Health, *Health Sector Policy Paper*, Washington, D.C., March 1980.

²Management Sciences for Health, *Managing Drug Supply: The Selection, Procurement, Distribution, and Use of Pharmaceuticals in Primary Health Care*, Boston, 1981.

2. Financing

- Compensate community health workers.
- Pay for drugs, consultations, and other services.

3. Health Improvement

- Contribute labor and local materials.
- Identify and seek solutions to health problems.
- Plan and initiate self-help activities.

Progress in Developing Community Participation

In many projects, these general objectives of popular participation have not been translated into clearly defined activities on which project staff can focus and which can be verified and evaluated. Although certain expected forms of participation (e.g., the selection of health workers and the formation of health committees) are well-defined, neither communities nor project personnel may have precise ideas about what they should do or what they should expect from general community participation goals, such as communities' actively seeking solutions to health problems.

Project evaluations reveal a definite pattern of results from community participation. Generally, community support of specific and concrete functions and activities (e.g., health hut construction or provision of labor for water projects) has been successful, but other kinds of activities have not. Communities tend to *support* activities, but not to *initiate* them. Progress in the areas of organization, financing, and health improvement is summarized below.

Organizational Activities

The initial recruitment of community members to serve as health workers has been successful, although attrition and compensation have later become problems. In 28 of the projects, communities have provided health workers who receive only token remuneration. (See Chapter 4.) The organization of village health committees also has progressed well, although in most projects the committees have not remained active and thus have not proven to be a satisfactory mechanism for stimulating local participation.

At least 80% of the projects have created special health committees as the organizational framework for community participation at the village level, and for interaction between the community and government program personnel. Other projects have used existing development organizations as the institutional structure for participation.¹

Many of the committees (both types) have been delegated a wide range of health responsibilities. In at least five of

¹El Salvador/RHA, Lesotho/RHD, and several other projects do not have committees at this time.

the projects,² the committees have been designated to administer revolving funds for drugs; in Mauritania/Trarza, plans are for committees to generate funds to transport and resupply CHWs with medicines. In Guatemala/SIN-APS, PRINAPS, and RHS, Peru/ORDE-ICA, and Afghanistan/BHS, the health committees are responsible for overseeing the work of the CHWs; in Nicaragua/PRACS, the committees have been charged with ensuring the proper use and maintenance of water systems and latrines; and in Senegal/Sine Saloum, village management committees have been given responsibility for overseeing the operation of village health posts. It is also planned that health committees in many of the projects organize labor to construct such community facilities as health posts, wells, and latrines.

In addition to specific tasks, some committees have been given responsibility for stimulating community efforts to solve complex environmental, economic, and social problems which contribute to poor health in the community. Community health committees with broad self-help directives are found in Panama/RHDS, Kenya/Kibwezi, Peru/Extension and ORDE-ICA, the three projects in Nicaragua, and several other projects.

Where government-salaried workers provide services at the community level, the responsibilities of the committees are usually more limited. Typically, duties do not extend beyond the selection of CHW candidates and the organization of participation in occasional activities initiated from outside the community, such as construction of water systems and latrines. However, there are exceptions. In Yemen/Tihama, the health committee, which is part of the local (district) development association, has responsibility for planning and managing the PHC units and for administering public revenue for use in local health projects. And health committees in Panama are expected to administer funds and to develop plans for the repair and upkeep of health posts and centers.

The pattern that emerged from the projects reviewed is that community health committees undertake few of the responsibilities expected of them. Committees are generally active during the early phases of the project when they are first organized. However, activities taper off once the project gets under way and specific start-up activities, such as selecting health workers, have been completed. In many projects the committees are no longer active, as the following examples show.

- **Senegal/Sine Saloum.** In the 1980 evaluation, it was observed that the village management committees had apparently "disappeared." In no village was a health team being managed or otherwise supervised by the committee, as had been planned.

- **Afghanistan/BHS.** Less than six months after the selection of health workers, the project evaluators could find no active committees.

- **Central African Republic/Ouham.** The 1980 evaluation team could find no evidence of the 80 or more village health committees that had been active in 1979 (originally, 100 had been formed).

- **Thailand/Lampang.** According to a 1981 report, community health committees, after selecting the volunteers, remain only marginally active.

These examples do not imply that all community health committees and other local groups responsible for PHC activities become inactive. There are examples of well-functioning groups, for example, the Nicaragua/PRACS and East Coast committees. In addition, the following projects are notable.

- **Tanzania/Hanang.** According to the 1980 AID evaluation, nearly all (43 of 48) village development committees are still actively engaged in health matters, such as supervision of CHWs, and in discussing the results of project-monitoring systems with the political leaders of the villages.

- **Indonesia/VFP-MCW.** The mothers' clubs, which are responsible for the village programs, take an active role.

- **Panama/RHDS.** The national system of more than 1,000 community health committees established by the government since 1970 is generally viewed as active and effective. (The project has used these existing organizations.)

Financial Activities¹

Typically, projects have sought local financing for payment of drugs and support of the CHW—budget items that account for a major share of recurrent costs. (See Table 6, [page 38]) Studies have shown that individuals spend a sizable portion of disposable income on health care; therefore, project planners have felt that some of this "available" money could be tapped. The problem has not been to get individuals to pay for drugs, but to obtain sufficient money or in-kind contributions to remunerate the CHW at an acceptable and consistent level. None of the projects has solved this problem.

1. Payment for Drugs

The projects have reported no problems in getting villagers to pay for drugs distributed by CHWs. This may be because villagers have always had to pay for their medicines. Government clinics often run short of free drugs; thus, even those rural patients with access to clinics are accustomed to having to purchase drugs from other sources. Furthermore, the drugs available from CHWs are generally less expensive than those available from commercial pharmacies, and they are available closer to home.

2. Financing of Community Health Workers

Projects whose CHWs do not receive government salaries must rely on communities for compensation, or must ask CHWs to work as volunteers. Several projects have been

²These projects are Senegal/Sine Saloum, Bolivia/Montero, Bolivia/RHDS, Peru/ORDE-ICA, and Mauritania/Trarza.

¹Community financing is explored in a separate study by Wayne Stinson, *Community Financing of Primary Health Care*, APHA, Washington, D.C. 1982.

established on the premise that CHWs would serve without any remuneration. However, these projects have found that some form of remuneration is required. For example:

- **Tanzania/Hanang.** Initially, the government's position was that CHWs should be volunteers. However, the CHWs made known their dissatisfaction with this approach, and they subsequently either received payments or were excused from communal work in the village. At this time, 50% of the CHWs receive some form of remuneration directly from the community.

- **Indonesia/VFP-MCW and Honduras/Integrated.** These projects also have found that incentives must be introduced. In Indonesia, plans are to provide special uniforms and access to village seedbanks and tools. In Honduras, non-cash remuneration is being considered.

In 28 of the 52 projects included in this study, the community has responsibility for compensating village health volunteers. (See Tables 6 and 7.) Of the projects for which financing information was obtained:

- 15 projects provide some cash remuneration,
- 4 projects provide only non-cash remuneration, and
- 7 projects provide no compensation.

Although approximately 50 percent of the 28 projects have established a mechanism to generate cash, and several projects provide non-cash remuneration, nearly all have found that the incentives are inadequate, and they are exploring remuneration alternatives. The finance mechanisms that are being used to raise cash in the projects reviewed are limited. They include:

Drug Profits: The most common finance mechanism is the use of drug profits to compensate CHWs.¹ Ten projects now use this mechanism.²

Fee for Service: The Bolivia/Chiquitos and Kenya/Kitui projects authorize the CHW to charge small fees for curative care and maternal and child health services. The Senegal/Sine Saloum project initially attempted to use service fees to cover the costs of both drugs and CHWs' salaries, but expenditures soon exceeded revenue and the scheme collapsed.

Insurance: Okgu, one of the areas in the Korea/KHDI project, uses a prepaid health insurance scheme to pay for health services, including the salary of the facility-based community health aide, but not the village-based health agent.

Reliance on profits from drug sales has proven unsatisfactory, for the profits are too small and irregular to compensate the health worker adequately. This lack of adequate compensation is reported to contribute both to CHWs' dissatisfaction and high attrition rates in many of the projects. The limited available data indicate a high of \$20.00 per month in Bolivia/Montero (during good periods) and a

low of \$1.00 per month for Thailand/Lampang, with Afghanistan/BHS reporting profits in the \$5.00 range. This income compares poorly even with the government salary provided in a country with one of the lowest per capita incomes (Nepal pays part-time CHWs \$17 per month). Obviously, drug profits do not come close to providing a basic salary. The sale of drugs to compensate health workers has undesirable ramifications as well: The mechanism encourages the prescription of drugs and discourages the provision of education and other preventive measures which do not generate income.

Some of the projects provide non-cash remuneration in the form of exemption from military services (Guatemalan projects), free health care for the CHWs' families (Thai projects), help with field work during the agricultural season (Niger projects), and exemption from communal work (Tanzania/Hanang). In some cases, the program provides only non-cash compensation; in others, CHWs receive both cash and other compensation. (See Table 7.)

The financing of health workers received minimal attention in the earlier projects. The need for village support is mentioned, but concrete plans and the calculation of income to be generated are usually absent. In the plans for certain recently initiated projects, such as Mauritania/Trarza (1979), Lesotho/RHD (1979), and Senegal/Sine Saloum (as redesigned in 1980), more attention has been given to the issue of community financing, indicating that the experiences of the earlier projects are being considered. The plans of some of these projects also reflect a different approach—collaboration with the community to work out suitable financing mechanisms *before* the CHW is selected. In Mauritania/Trarza, for example, villages must work out a viable and acceptable financial plan before they can send someone to receive training as a health worker.

Health-Improvement Activities

Community involvement in activities directly related to service delivery has been considerable, but little headway has been made in stimulating communities to identify health problems, develop solutions, and mobilize resources to solve health problems. There has been only limited and occasional community involvement in undertaking health improvement activities. The strongest evidence of community-initiated activities, rather than community-supported activities, comes from six projects included in this study.

- **Nicaragua/East Coast.** Using the results of community-conducted needs surveys, health committees have planned and implemented health-improvement projects that have included the construction of wells, latrines, and health posts and the development of community gardens.

- **Tanzania/Hanang.** According to the 1980 evaluation, some health activities (e.g., latrine and garbage-pit construction, and water protection) have been initiated in a few villages.

- **Nicaragua/PRACS.** Although information on commu-

¹See discussion of incentives in Chapter IV.

²Senegal/Sine Saloum (redesigned), Thailand/20 Province, Thailand/Lampang, Bolivia/Montero, Bolivia/RHDS, Peru/ORDE-ICA, Afghanistan/BHS, Mauritania/Trarza, Nicaragua/East Coast, and Mali/Yelimane-Koro.

nity participation in this project is sketchy, it appears that the communities initiated *some* community-action projects. The village health committees also were active in supporting development projects initiated by the MOH. These projects involved the construction of small aqueducts, latrines, and wells, and vector extermination. Communities provided labor and some funds.

- **Bolivia/Montero.** Although little community-initiated activity has been reported, some communities have built latrines and organized mothers' clubs.
- **Kenya/Kibwezi.** The communities have initiated such activities as the collection and disposal of garbage and the protection of wells, and they are encouraging use of latrines.
- **Philippines/PUSH.** This project has been successful in involving *barangay* (village) residents in a variety of projects to improve environmental sanitation (construction of wells, latrines, blind drainage, spring development, and other efforts). Residents have played an active role, identifying problems and the kinds of projects suited to their community, and choosing the location for projects. Villagers have contributed materials (sand, gravel, and bamboo), as well as labor, for initial construction and maintenance.

These six projects share two important characteristics: All are small-scale efforts and half have been implemented by private voluntary organizations (PVOs). Three have populations of fewer than 60,000 persons, two are under 200,000, and one has a population of 600,000. None is national. The three projects that appear to have mounted the most comprehensive community participation effort were implemented by private voluntary organizations, not by the government. These are the Kenya/Kibwezi, Tanzania/Hanang, and Nicaragua/East Coast projects. The private voluntary organizations that are administering these projects have long experience in the project areas, and community participation is an integral part of their philosophies. It appears that these two factors—experience and orientation to community participation—provide the sensitivity to both the culture and the process of community development that is needed to undertake successfully the difficult task of community organization. Also, working outside the administrative framework of the government does seem to give greater flexibility and to free the project from many bureaucratic bottlenecks which can limit community-level work. (These topics are discussed in Chapter V.)

A number of other projects can be singled out for community collaboration in health-improvement activities. Although communities did not actually take the initiative for developing activities, considerable community support is evident. These infrastructure-development projects were initiated and funded by the government, but community members contributed labor and local materials, which in some cases represented an estimated 10%-20% of project costs. And, in several projects, the communities appear to have taken a substantial role in planning and administra-

tion. The following projects have mobilized community resources.¹

- **Nicaragua/Rural Health.** PLANSAR, the rural water division of the MOH, has constructed more than 15,000 latrines and 19 water systems in 150 communities. Local communities are providing 10% of community-level costs in the form of volunteer labor and local materials.
- **Thailand/Lampang.** Villagers have provided labor and materials to construct 316 shallow wells in 61 villages and to build village health nutrition centers (82 had been constructed by 1980).
- **Mali/Yelimane-Koro.** Communities have contributed labor and local materials for the construction of wells in Koro district, and have provided lodging for the well-drilling teams.
- **Panama/RHDS.** The MOH provides materials and technical assistance to communities which apply for piped water systems. Local residents provide labor and must construct latrines in each household (materials and instructions are given by the MOH; labor is provided by the villagers), pledge to pay water-users' fees, establish a maintenance fee, and appoint a local maintenance person. As of 1978, the project had completed more than 8,000 latrines, 200 aqueducts, and 400 hand-pumped wells. The Project Paper (plan) projected that communities would contribute 20% of the cost of these projects.

Projects which have succeeded in involving communities in health-improvement activities vary widely in their characteristics and implementation histories. They do, however, share a number of common traits.

1. Funding Provided.

In all the projects, the major capital-investment costs of health improvement (latrines, wells, etc.) are borne by either the government or the project, and not the community, although maintenance and users' fees are sometimes the responsibility of the community.

2. High Community Perception of Benefits.

All the projects focus on improving the availability and quality of water, issues which community surveys consistently have shown to be of particular interest.

3. One-Time Effort.

The health-improvement projects carried out with community help are discrete construction efforts. They also tend to involve one-time efforts requiring little community involvement or attention (other than maintenance) once they are completed. Unlike communal gardens or garbage-collection efforts, the community-mobilization effort can be concentrated during a brief period, and follow-up can be sporadic.

¹Plans to involve communities in water and sanitation projects are mentioned by other programs, but no reports are available on whether or not these activities have yet taken place. The projects are Peru/Extension, Tanzania/School Health Program, Guyana/RHS, Haiti/RHDS, Honduras/Integrated, Philippines/Bicol, Dominican Republic/Health Sector, Swaziland/RWBDC, Yemen/Tihama, and Guatemala/SINAPS, PRINAPS, and RHS.

4. Small-Scale.

Three of the four projects are small, having fewer than 200,000 inhabitants in the project area; one has 600,000. Small infrastructure projects may be more difficult in larger projects because of the high costs of materials and because of the managerial challenges of simultaneously developing and overseeing popular participation in a large number of communities.

5. Substantial Community Organization Effort.

The projects stand out as having given more than the usual attention to generating community support (with the exception of the Mali/Yelimane-Koro project, which appears not to have emphasized community participation). Of the 52 projects reviewed, only 11¹ appear to have expended considerable effort in this area. The projects discussed above fall in this category.

Sustaining Community Participation Over Time

A pattern of decreasing activity is emerging in many projects. Typically, there is a surge of activity at the beginning. Village health committees are created, CHWs are selected, and health posts are constructed. At this time, outside organizers are active in initiating the program. Subsequently, activity seems to diminish.

There is nothing to indicate that the longer-running projects have resolved this problem and have been able to stimulate participation in an ongoing community-development effort. For example, the latest evaluations of Honduras/Integrated and Thailand/Lampang, both of which have been operating since 1975, indicate that these projects have never developed much community participation. Other long running projects, for example, Jamaica/Children (1976) and Dominican Republic/Health Sector (1976), also report little community-initiated health activity at this time, and have inactive health committees.

It is sometimes difficult to sustain community interest and involvement. The Philippines/PUSH project, for example, reports that village residents who have already contributed time and labor to one community project are, not surprisingly, reluctant to do so again, especially when they personally will not be the prime beneficiaries. And the Thailand/Lampang project, which reported participation in sanitary infrastructure projects, has not been able to sustain community activity. Of the projects reviewed, the Nicaragua/PRACS and East Coast projects have been the most successful in sustaining community participation.

FACTORS INHIBITING COMMUNITY PARTICIPATION

The generally low level of community participation in the 52 AID-assisted PHC projects is the result of both pre-existing community and government attitudes and of shortcomings in project design and implementation. These factors are discussed below.

Pre-Existing Community and Government Attitudes

1. Lack of Perceived Utility

Traditionally, communities have had access to some kind of health care—through healers, pharmacists, or even older family members experienced in dealing with sickness. The introduction of health care by CHWs and the encouragement of communities to solve health problems may not, therefore, be perceived automatically and immediately as essential. Although studies of household expenditures indicate that villagers spend considerable portions of their income on health care, community funding for a new kind of health worker has been difficult to obtain. As discussed in Chapter IV, CHWs, with their limited training, *may* not be credible, the preventive services they offer *may* not be valued, and the drugs they distribute *may* differ from what people are accustomed to taking. Furthermore, villagers *may* not wish to change their pattern of receiving health care to patronize the CHW when drug supplies are not regularly available. Few of the projects have attempted to gauge confidence in the programs and in the health care agents themselves, although this appears to be a significant issue.

Given the relatively low priority assigned to preventive health services in rural areas and the poor understanding of basic Western health principles, there is little innate interest in the preventive and promotive aspects of the programs. There also is little motivation to modify behavior and living patterns and to undertake activities to resolve problems.

2. Cultural and Historical Impediments

It is assumed in most discussions of community participation that a group of dwellings constitutes a "community" with common goals and values and a collective capacity to determine priorities, make decisions, and allocate resources. These assumptions are not always valid. In affairs not related to religion, family, or tribe, communities are not commonly accustomed to collective problem-solving. Also, common-interest groups do not necessarily parallel political jurisdictions or geographic communities. These facts are reflected in several case studies of the projects reviewed in the analysis.

● **Niger/RHI.** It was reported in an anthropological study that community participation was hampered because traditional Hausa society has little capacity to act collectively at the village level. Actions to mobilize resources for common interest, or even to maintain existing facilities, either must be imposed by external authorities or restricted to groups within the village society which, in fact, share interests.

● **Swaziland/RWBDC.** Similar problems in undertaking community efforts have been encountered because rural Swazis commonly do not live in villages, but in individual homesteads that are limited to members of the extended family.

¹See discussion on level of effort later in this chapter.

Historical and cultural factors also contribute to negative community attitudes toward support of government programs. In several of the 52 projects, there are observations of the "historic passivity of the villagers," suspicion of government programs, and the feeling that the programs are government, not village, efforts. The programs are instituted from above, and the recognition of this fact does seem to color villagers' perceptions. Three examples illustrate this point.

- **Afghanistan/BHS.** Project staff found it difficult to convince communities that they themselves had to take responsibility for financing their health workers. The communities were convinced that because the government initiated the program, it would eventually assume all costs.
- **Senegal/Sine Saloum.** The tendency of the community was to deny responsibility for the maintenance and continuation of externally-sponsored activities. This tendency is understandable, because historically, public authorities have been unwilling to relinquish control over programs, even though they were carried out by and were designed to benefit local residents.
- **El Salvador/RHA.** The project plan for one of the related health projects indicates that occasionally there is outright rejection of government-provided services by the community. These services may be regarded as palliative and politically motivated.

Generally, the projects in Latin America seem to have benefited from the long tradition of community-development and self-help activities in that region; those in the Near East, however, have not enjoyed the same benefits because, historically, most governments in the region, except perhaps Yemen, have done little to encourage community participation.

3. *Unfavorable Government Attitudes*

Despite rhetorical support of the importance of community participation, most governments expend minimal effort to generate and sustain it. Certain governments are cool to community participation because it raises expectations, creates demands that governments cannot or will not meet, and because it can generate political unrest.

Project Design and Implementation Features

1. *Insufficient Planning*

The stimulation of community involvement in the health care effort is an expressed goal and part of the core strategy for most of the projects; nonetheless, it receives few project resources and only the barest mention in most implementation plans and evaluations. It often seems as if project planners expect participation to develop spontaneously. Generally, insufficient attention is given to the significant effort and deliberately slow pace required to gain a community's trust and support. This may be because of unfavorable government attitudes or lack of awareness of the level of effort and complexity of fostering community participation.

With few exceptions, project plans contain little or no discussion of what community participation is, how it can be achieved, and what kinds of activities communities can be expected to undertake to improve their health. Similarly, in evaluations and progress reports, the entire subject of community participation is addressed only in very general terms. These reports tend to state only that the project has little or no participation. Generally, expectations—the objectives for community participation and activities, even the activities and processes considered to be indicators of participation—are not clear. The exceptions that have been identified include the Nicaragua/RHS and PRACS, Indonesia/VFP-MCW, Bolivia/Montero, and Nepal/Integrated projects. These projects have special evaluation components to examine community participation and to analyze health activities that derive from the projects.

2. *Bureaucratic Inflexibility*

The education, motivation, organization, and support of a large number of participating communities are not activities conducive to fixed schedules and to use of management planning techniques which program activities for certain lengths of time. Individual communities differ in their readiness to participate; therefore, the amount of time and the level of effort required to organize a community must necessarily vary from community to community. AID and government planners and administrators often find it difficult, if not impossible, to build into programs the flexibility that is required. The common result is superficially organized communities in which health committees have been formed but for which little else has been done to change patterns of interaction to promote health.

3. *Low Level of Effort*

The time, money, and human resources required to develop and sustain community participation have been severely underestimated. Project plans and reports on the implementation of programs indicate that the experience acquired by national and international agencies during 30 years of community-development efforts in other sectors is applied in few projects.

Communities often are not introduced to a program appropriately, nor do they receive critical follow-up support. In studies of the Senegal/Sine Saloum and Bolivia/Montero projects, it was found that in introducing the programs, greater emphasis was placed on the benefits that would accrue to the communities than on the responsibilities which the villagers would have to assume. Both projects, for example, reported that because a large number of villages had to be visited (44 in Bolivia/Montero and 100 in Senegal/Sine Saloum), the time spent in any one was necessarily brief. Other projects also have not taken enough time to explain the program. Studies in Honduras/Integrated and other projects show that only a minority of the village population clearly understood the community's responsibilities and the project's objectives.

From the documents reviewed, it appears that communities in only a few projects were asked to demonstrate

interest in the program before being permitted to participate. Two projects may be cited as examples.

- **Mauritania/Trarza.** As mentioned, as a precondition to participation, villagers must devise an acceptable plan to remunerate their health workers.
- **Tanzania/Hanang.** Only those villages willing to financially support the health workers during their 10-month training period are eligible to join the program.

Descriptions of efforts to implement projects often give the impression that, generally, action to generate community support and participation is limited to organizing a community health committee and selecting CHWs. Mobilization of the community to undertake health-improvement efforts is then left completely to the community health committee. There is variation from project to project, but the following example describes a typical pattern.

- **Dominican Republic/Health Sector.** Community development workers were specially hired by the Ministry of Health. These community organizers were responsible for setting up village health committees throughout the country. They had time to visit communities only a few times at the beginning of the project. When they did so, they helped villagers identify health problems and advised them of the availability of community-development funds and of the responsibilities of their health committee. In the five years since these visits, there has been little, if any, follow-up. Community participation has been minimal.

Of all the projects reviewed, only 11 stand out as having given more than perfunctory attention to the generation of community support. They are:

- **Latin America:** Nicaragua/RCHS, Bolivia/Montero, Nicaragua/East Coast, Peru/ORDE-ICA, Nicaragua/PRACS, and Panama/RHS;
- **Africa:** Kenya/Kibwezi, Tanzania/Hanang, and Mauritania/Trarza;
- **Asia:** Philippines/PUSH and Thailand/Lampang.

These projects have devoted more than the usual time and resources to fostering participation. To be included in this category, projects had to meet two criteria: frequent community contact following initial start-up activities and an established process to involve communities in identifying health problems and analyzing solutions. The following examples illustrate the difference in approach taken by these "high-effort" projects.

- **Kenya/Kibwezi.** This project, more than any other reviewed, comes closest to having involved the communities. Villagers were involved in the project from the beginning, attending numerous meetings and taking part in surveys. The communities themselves decided not to form new health committees because the existing self-help committees could administer health activities. Considerable time and effort were devoted subsequently to assisting the self-help groups in identifying health problems, recognizing

ing their causes, and then working out plans to resolve them. Efforts were concentrated on encouraging communities to initiate actions, rather than to react to project initiatives.

- **Nicaragua/East Coast.** After village health committees were organized, project staff maintained regular contact with them, helping to plan and implement community projects. Each year, the project staff and each village committee conduct a survey of health and nutrition status. The results are reported at an open community meeting. This survey has proven to be extremely valuable in maintaining community participation. It also has enabled staff to become more conscious of health needs and priorities in the villages.
- **Tanzania/Hanang.** The staff of the project have initiated a regular village visitation program; staff spend one full week every two months—nearly six weeks per year—in each community. They have found this program to be an essential part of efforts to reinvigorate health workers and re-start health-related activities in the villages, if they have slackened.
- **Bolivia/Montero.** This project sought to prepare communities to analyze their own needs and desires and to determine to what extent they wished to participate. Although a mechanism for community participation was not part of the original project design, it was added during the early stages of implementation.

4. Health Ministries' Lack of Expertise

For government health personnel and project staff, the delivery of health services is, understandably, of highest priority. Because the long and difficult task of involving communities is often viewed as a secondary activity, it does not receive the attention it requires. It is possible that many ministries of health cannot sustain the double effort of extending health services and generating community participation.

Ministries of health generally lack expertise in community development, and they may not have a specialized division to carry out this kind of work. From the information available, it appears that most of the projects (e.g., Thailand/Lampang, Mauritania/Trarza, Lesotho/RHD, Thailand/20 Province, and Bolivia/Montero) have relied on regular health service personnel to organize the community initially and to motivate the health committees after they are formed. Although these people may have been trained in community work, they have little time to devote to the task because their primary responsibility is to provide health care. Another common approach has been to use MOH health educators, as in Honduras/Integrated, Nicaragua/PRACS, Jamaica/Children, and Mali/Yelimane-Koro. Health promoters, however, also cannot devote full-time to community organization. It seems that the kind and number of personnel allotted to carry out community organization may not only determine the amount of time that can be spent in any one village during either initial or follow-up visits, but also may affect the

quality of the community organization effort.

Several of the projects have used other government agencies with established links with the community for community development. For example, a community-development agency was used in Senegal (Promotion Humaine), Niger (Animation), Guyana (Cooperative Development), and El Salvador (DIDECO); and in Swaziland, community-development personnel from the Ministry of Agriculture and Cooperatives were enlisted. Other countries (e.g., Afghanistan and the Dominican Republic) have used specially-hired personnel for this purpose, or, as in Zaire and the Central African Republic, Peace Corps volunteers. It is suspected that agencies with rural development experience are the most effective at community mobilization.

5. Lack of Resources and Intersectorial Coordination

Few communities, even those that are highly motivated, have the financial and technical resources to undertake alone the kinds of health-improvement projects that are expected of them. Yet, few of the projects have established special funds to support such activities as the construction of latrines or wells, or other health-related projects communities may want to start. Among the few projects that were identified are the following:

- **Philippines/PUSH.** A special Barangay Fund was established to support community-initiated activities. This fund supplements regular government and project funds earmarked for sanitary infrastructure.
- **Yemen/Tihama.** The government plans to establish a \$300,000 revolving fund from which local development associations (health committees) can borrow for health expenditures of their own choosing.
- **Indonesia/VFP-MCW.** Project funds have been set aside to support innovative local development efforts to increase food production and the income-generating activities of women's groups.

Most of the projects also lack the kind of strong intersectorial coordination that is required to respond adequately to community initiatives in various development sectors.¹ Most basic improvements in health require action in diverse sectors. Improvement in nutrition, for example, cannot in many cases be expected unless changes in agricultural practices and cropping patterns, as well as dietary habits, also occur. A decrease in infant mortality may depend on the construction of latrines, the development of protected water supplies, and increased knowledge of personal hygiene. Such actions require that government agencies, including ministries of education, agriculture, community development, and public works, support community activities with financial and technical resources. Project

¹An interesting perspective on the importance of coordination would have been provided by the Mali/Yelimane-Koro project, which planned to determine whether or not community-development activity in agriculture makes a difference. The experiment was dropped because of unplanned events in the control area.

reports mention little coordination with other ministries, or with ongoing community-development efforts. Coordination with the formal education system is the only frequently mentioned form of intersectorial linkage.

- **Bolivia/Montero.** Teachers in rural areas were trained to provide health education.
- **Central African Republic/Ouham.** Health was introduced into the elementary school curriculum.
- **Tanzania/Hanang.** Health education classes are being held in conjunction with adult education courses, and in the primary schools as well.

The following is a summary of other coordination efforts for which information was obtained.

- **Philippines/Bicol.** Family planning personnel, *barangay* nutrition experts, and sanitation experts from the Department of Public Works are scheduled to coordinate preventive efforts in the communities.
- **Panama/RHDS.** The government has a strong community-development policy and has made an effort to integrate agricultural and water and sanitation projects with health. The PHC programs are situated in zones (designated as "community-development" zones by the Ministry of Planning) to assist in promoting integrated rural development.
- **Indonesia/VFP-MCW.** This project has a strong intersectorial orientation. The main goal—the improvement of nutrition—is tied to the effective mobilization and coordination of efforts in several sectors, including agriculture, animal husbandry, cooperatives, and university research facilities. Project development and management teams have been established at provincial, regency, and sub-district levels, with representation from several government agencies. The project also maintains strong links with the Provincial Development Planning Board to assess the nutritional consequences of local development activities.
- **Thailand/20 Province.** The government's strategy is to make primary health care a component of community-development efforts. Village health workers have proven to be most active in nutrition and water supply projects. It is planned that they will work closely with agricultural extension and community development workers, as well as with other groups.
- **Kenya/Kibwezi.** The importance of collaborating with other sectors involved in community-development programs is stressed in planning documents.

In addition, a number of projects (e.g., Peru/ORDE-ICA and Yemen/Tihama) have tried to coordinate with activities in other sectors by making the newly formed health committees part of established local community-development groups.

6. Ineffective Mechanisms for Obtaining Participation

Community health committees have been used by most of the projects as the principal mechanism for generating

and sustaining participation. One of the problems noted in those projects that have studied community participation is that neither the committees nor the communities have a clear conception of the committees' role and specific functions. What may contribute to this common problem is the fact that approximately 75% of the committees are single-purpose groups that have few perceived reasons for meeting once they have chosen health workers for the community—generally, their most specific and immediate task. Committees are also at a disadvantage because they may be composed of persons who are unaccustomed to functioning together as a group. In addition, because the health committee may be only one of several groups organized by different government programs, the communities' interests and energies may be diffused.

There are exceptions to the committees that are specifically created for the health program. Some programs have utilized existing village organizations with broad responsibilities or established reasons for meeting.¹

- **Nepal/FP-MCH and Integrated.** These projects used the existing *panchayat* (town council) system, giving these village organizations responsibility for health activities.
- **Peru/Extension and ORDE-ICA.** In these projects, the health committees that were originally created were absorbed by the community-development committees in some areas.
- **Yemen/Tihama.** District-level development associations have been given assistance to plan, finance, and manage PHC units and to supervise CHWs.
- **Kenya/Kibwezi.** This project made use of pre-existing self-help groups, rather than create new organizations.
- **Indonesia/VFP-MCW.** Existing mothers' clubs have been delegated responsibility for village-level health activities.
- **Haiti/RHDS and Botswana/HDS.** The community and town councils have taken on health duties.

7. Lack of Training and Critical Follow-up Support for Committees

Project documents suggest that some of the tasks which village health committees have been asked to perform require skills and a range of experience that the members do not possess. Few committee members, for example, have experience in initiating community-development work, raising funds to compensate village health workers, or carrying out such specific tasks as supervising health workers, managing revolving drug schemes, and monitoring receipts and medical stocks. Yet, when a community is interested in undertaking an activity, and when that activity is important to people (examples might be raising funds for a celebration or for construction of a temple or shrine), communities become involved without outside

advice or special training. This analogy, although not exact, does suggest that the problem may be one of priority, rather than of skills.

Only a few projects are training committee members to undertake assigned tasks which may be unfamiliar.

- **Senegal/Sine Saloum.** The redesigned project (1980) includes a management training component for the village management committee, in addition to orientation in community development.
- **Bolivia/Montero.** Three days of leadership training were given to committee members; this was followed by two days of training in the planning and management of community funds and the procurement of supplies.
- **Niger/Diffa.** Committee managers received three days of special training to help them understand the role of the village health worker. They also were instructed in simple accounting and recordkeeping. (The government recently disbanded the committees because of friction between them and the CHWs.)
- **Mauritania/Trarza.** Implementation plans call for the training of committee members in management functions.
- **Panama/RHDS.** To maintain and operate the community water supply system, the members of the committees receive training and guidance from the MOH, in addition to technical and engineering assistance.

It is not possible to draw firm conclusions about the effectiveness of such training. Nor is it possible to state definitively that the trained committees are doing a better job than the others. It is interesting to note, however, that only one of the programs (Senegal/Sine Saloum) mentioned training village leaders and health committees in initiating community-development or self-help activities, activities which could lead to village-initiated health-improvement actions. The orientation of the training is toward more specific duties.

Some projects, namely the 11 "high-effort" projects discussed earlier in this chapter, have provided ongoing support and guidance to health committees during the staffs' frequent contact with the communities. In such projects as Kenya/Kibwezi, for example, project staff have helped the committees identify health problems and work out plans to resolve those problems. This kind of assistance has been shown to help committees undertake the activities and functions expected of them.

8. Lack of Community Input in Project Design

Communities rarely have a role in defining major features of programs, or even in determining what their own activities and responsibilities will be. Most communities are presented with a defined package of responsibilities and a predetermined format for executing those tasks. (Nicaragua/PRACS and Kenya/Kibwezi are notable exceptions.) The result may be either that the community does not perceive the services offered as important, or the method of delivery and the proposed role of that community may

¹In addition to the six projects listed, multipurpose committees are found in the following projects: Thailand/20 Province, Guyana/RHIS, Sudan/Northern and Southern, and Tanzania/School Health. Existing groups sometimes were used in the Panama/RHDS, Philippines/PUSH, and Thailand/Lampang projects.

not be viewed as appropriate.¹

In only a few projects are there indications that the communities have had a role in defining their relation to the program, specifying the activities they will undertake, and determining the methods they will use to fulfill specific responsibilities, such as providing remuneration for CHWs (e.g., Mauritania/Trarza, Kenya/Kibwezi, and Tanzania/Hanang). A few communities have been given responsibility for specific program components, such as determining clinic hours (e.g., Guatemala/SINAPS); developing maintenance plans for health posts (Panama/RHDS); and selecting sites for water projects (e.g., Philippines/PUSH).

9. Little Support of Communications

Only about one-third of the programs have used, or are

¹Approximately 15 projects have undertaken surveys of community needs. Projects, however, vary considerably in the extent to which these surveys guide program format and services.

planning to use, mass media to support their efforts and to stimulate greater awareness of and interest in health among the rural population.² In PHC programs, the mass media would seem to offer potential for stimulating receptivity toward preventive health activities and for raising the health consciousness of the population. Although mass media alone have not proven to be effective in changing people's health and nutrition habits, research has demonstrated quite conclusively that mass media can support programs and present new ideas and information.³

²These projects are Nepal/FP-MCH, Bolivia/Chiquitos, Mauritania/Trarza, Dominican Republic/Health Sector, Haiti/MCH-FP and RHDS, Honduras/Integrated, Peru/ORDE-ICA, Lesotho/RHD, Niger/RHI, Senegal/Sine Saloum, Sudan/Northern and Southern, Korea/KHDI, Swaziland/RWBDC, Pakistan/BHS, and Nicaragua/East Coast, PRACS, and Rural Health.

³See *The Use of Radio in Primary Health Care Projects* (in press), APHA, 1982.

Table 6 COMMUNITY RESOURCE CONTRIBUTIONS¹

Projects by Region and Country	CASH		IN-KIND	
	Planned	In Operation	Planned	In Operation
ASIA				
Indonesia/VFP-MCW	Communities to finance nutrition activities			
Korea/KHDI		In 1 of the 3 project areas (Okgu), prepayment insurance scheme used to pay facility-based Community Health Aides (not village-level Health Agents); non-members in Okgu pay fees for service		
Nepal/FP-MCH	Not planned		Not planned	
Nepal/Integrated	Not planned			Labor and materials for constructing health posts
Pakistan/BHS	Experimenting with various ways to pay CHWs, including drug profits and fees for curative services			
Philippines/Bicol		Pay for drugs; use revolving drug fund with start-up capital from AID; small markups used to finance community health projects	Labor for constructing water-sealed toilets	
Philippines/PUSH		Pay for drugs; use revolving drug fund with start-up capital from AID; small markups used to finance community health projects		Labor and materials for constructing and maintaining latrines and water systems

¹Fees paid to TBAs are not listed on this chart. TBAs usually provide free preventive services but charge fees for attending births. The 20 projects using TBAs are listed in Table 7.

Three projects, Haiti/SHS, Central and West Africa/SHDS, and Swaziland/HMT, are not included in this chart because they are not service delivery projects. No information was found on Jamaica/Children, Egypt/Strengthening, and Egypt/Urban.

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Projects by Region and Country	CASH		IN-KIND	
	Planned	In Operation	Planned	In Operation
Thailand/Lampang		Pay for drugs and make donations for contraceptives; drug profits (approx. \$1.00/month) paid to Health Post Volunteers (not Health Communicators); donations sometimes made for clinic services; provide funds (matched by local organizations) for construction of village child nutrition centers		Labor and materials for constructing wells and village child nutrition centers
Thailand/20 Province		Pay for drugs; drug profits paid to Village Health Volunteers (not Village Health Communicators)		Labor and materials for construction of village child nutrition centers
LATIN AMERICA				
Bolivia/Montero		Communities decide how to pay CHWs—usually from drug profits (\$20 during good periods)		Labor for building latrines
Bolivia/Chiquitos		Pay CHWs for parasite treatments, immunizations, and MCH services		Labor and materials for building latrines and dispensaries; provide food and housing for medical teams during visits
Bolivia/RHDS	Considering formation of cooperatives or regional corporations to help pay CHWs	Pay for drugs; profits from drug sales paid to CHWs		
Dominican Republic/Health Sector	Communities maintain and partially fund potable water systems and latrines		Labor and materials for constructing potable water systems and latrines	
El Salvador/RHA	Considering having agricultural cooperatives pay CHWs to replace government salaries	Pay CHWs for injections		
Guatemala/PRINAPS		Pay for drugs; use revolving fund	Labor and materials for latrine building, garbage collection, and potable water systems	
Guatemala/RHS		Pay for drugs	Labor and materials for health and sanitation projects	
Guatemala/SINAPS	Considering paying CHWs through fees for injections and/or consultations	Donations made for contraceptives	Labor and materials for latrine building, garbage collection, and potable water systems	
Guyana/RHS	Considering in-kind compensation or other support for CHWs to replace government salaries		Labor and materials for constructing latrines and improving water supplies	

Projects by Region and Country	CASH		IN-KIND	
	Planned	In Operation	Planned	In Operation
Haiti/MCH-FP	Not planned		Not planned	
Haiti/RHDS		Pay for drugs; use revolving drug fund		Provide housing and food for trainer visits
Honduras/Integrated	Considering ways to support CHWs	Government prohibits salaries based on drug profits or fees for services		Labor and materials for water and sanitation projects
Nicaragua/PRACS and Rural Health	Compensation planned for CHWs	Pay for drugs; provide \$35.00 for initial medicine kit		Labor and materials for constructing latrines, water systems, and health posts
Nicaragua/East Coast		Pay for drugs; use a revolving drug fund; pay health leaders using drug sale profits		Labor and materials for constructing wells, latrines, health posts, and community gardens
Panama/RHDS		Pay for drugs; pay for use of piped water systems		Labor for constructing latrines, wells, and aqueducts, and for repairing and maintaining health posts
Peru/Extension			Labor and materials for health and sanitation projects	
Peru/ORDE-ICA		Pay for drugs; use a revolving drug fund with start-up capital provided by government; pay CHWs using drug sale profits		
AFRICA				
Botswana/HSD		Persons over 12 years of age pay fees for services at government health facilities		
CAR/Ouham		Pay for drugs		
Kenya/Kibwezi	Communities to develop ways to remunerate CHWs; considering family capitation charges or fees for services			Labor and materials for constructing health posts, garbage collection, and protection of wells
Kenya/Kitul		Pay CHWs fees for curative services and MCH care		Labor for health post construction in some communities
Lesotho/RHD	Local financing of CHWs being studied to replace government salaries	Pay fees for services at clinics		
Mali/Yelimane-Koro	Communities are encouraged to provide non-monetary compensation to CHWs	Pay for drugs; some CHWs are paid from drug profits		Labor and materials for constructing storerooms for drugs, latrines, and wells; provide food and housing for visiting well drilling teams

Projects by Region and Country	CASH		IN-KIND	
	Planned	In Operation	Planned	In Operation
Mauritania/Tarza		Drugs and some CHWs are community financed from drug profits or from family contributions		Labor for small village projects such as garbage collection
Niger/Diffa and RHI		Pay for drugs; initial drug supply paid for by government (attempt to have communities pay failed); non-monetary compensation for CHWs is common		
Senegal/Sine Saloum	Income from collective fields being considered to support CHWs, because health hut funds (from drugs and services) are not adequate	Pay for drugs; drug profits and fees used to pay CHWs		Labor and materials for constructing health huts, latrines, and other sanitation projects
Sudan/Northern		Make donations at health facilities	Labor and materials for building and maintaining primary health care units	
Sudan/Southern		Make donations at health facilities	Labor and materials for building and maintaining primary health care units	
Swaziland/RWBDC	Not planned		Labor for constructing latrines	
Tanzania/Hanang		Pay for drugs and immunizations; some villages have provided funds for initial drug supply; about 50% of CHWs are paid by communities (cash or in-kind); communities finance CHWs during 10-month training course	Labor and materials for building health posts, dispensaries, water systems, pit latrines, and rubbish dumps	
Tanzania/School Health	Not planned		Labor for water supply improvement projects and latrine construction	
Zaire/HSD	Fees for services to CHWs and health insurance planned			
NEAR EAST				
Afghanistan/BHS		Pay for drugs; revolving drug fund established with UNICEF funds; profits from drug sales used to pay CHWs (approx. \$5.00/month)		
Tunisia/RCH	Not planned		Not planned	
Yemen/Tihama	Local development association revenues to supplement government salaries for CHWs; pay for health expenditures (drugs, construction, etc.) from government's revolving loan fund, repayment through local taxation			Labor for small village projects such as clean-up campaigns and preparing primary health care units for use

A community health worker in south Asia immunizes a child. (WHO/17724/A.S. Kochar)



health workers

To increase the rural population's access to health care, most of the projects studied have concentrated on the use of three different categories of health workers: mid-level workers, to provide basic health care at health facilities; community members, to provide simple curative and preventive care in the community itself; and retrained traditional midwives, to work at the local level. Several projects have also taken steps to incorporate traditional health practitioners, pharmacists, and other health agents presently working in the communities.

Many projects report considerable success in selecting and training large numbers of mid-level workers, community health workers (CHWs), and traditional birth attendants (TBAs). Even the training of illiterate midwives and others with rudimentary literacy skills has been a challenge which the programs seem to have met successfully. However, the effectiveness and the credibility of these new cadres of health providers and the relevance of their training to community demands have yet to be documented in most projects.

There are persuasive reasons for primary health care (PHC) projects to concentrate on the training of middle- and lower-level personnel. Chief among these is that persons with less training than physicians can treat the most common rural health problems. Other factors supporting this argument are that the number of physicians in many countries is inadequate, and in most countries, equitable distribution is often impossible because few physicians wish to serve in rural areas; the cost of training and maintaining large cadres of physicians is beyond the financial means of most countries; and the factor of time precludes the use of high-level medical personnel who may require more than five years to complete training.

There are also compelling cultural and social reasons for using health care agents whose background is similar to that of the rural population they serve. Physicians and others with long training and urban orientations may intimidate their rural patients and be unable to communicate effectively, because there is usually a vast cultural gulf separating the two groups. In dealing with the causes of poor health, more of a public health than a medical effort is required, and this is an approach that most physicians are ill-prepared to take.

MID-LEVEL PERSONNEL

Nearly all the projects which were reviewed are either introducing new categories of mid-level health personnel or retraining existing staff to assume new paraprofessional responsibilities. Training these workers as physician-extenders represents, for most countries, a major change in

policy on service delivery. Some countries, such as Tunisia and Lesotho, have had to enact special legislation to authorize non-physicians to provide health care.

Mid-level workers are considered critical to a primary health care system with a pyramidal service delivery structure. In programs with CHWs, it is the mid-level worker who first handles the referral cases that cannot be treated at the community level. And it is often the mid-level worker who supervises the CHW and has prime responsibility for the quality of health care in the communities. Not only do these paraprofessionals play a key role in the tiered health structure that is characteristic of PHC programs, but they also can have major responsibility for changing the orientation of health programs from curative care toward public health. This is possible largely because these are *new* categories of personnel whose responsibilities and training incorporate this dual orientation.

The following are examples of the kinds of tasks that mid-level workers are being trained to perform.

- **Lesotho/RHD.** Two classes of physician-extenders, nurse-assistants and nurse-clinicians, are being introduced. The assistants will provide curative services for 10-15 common problems and perform essential preventive and promotive activities. The clinicians are being trained to diagnose and treat common medical problems, organize preventive health care for children and mothers, institute public health measures, and stimulate community-development projects.
- **Egypt/SHDS.** Nurses are being trained to provide a wider variety of basic curative services and to initiate public health measures.
- **Thailand/Lampang.** A new category of physician-extender, the *wechakorn*, was introduced to provide care for common illness and injuries, to promote community programs, and to supervise community health workers.
- **Afghanistan/BHS.** Two new categories of mid-level personnel were created as part of the project. Female auxiliary nurse-midwives were trained to provide services to women (because they generally cannot receive care from males), and paramedics were trained to provide curative services for more complicated cases that could not be attended by community-level health workers.
- **Guatemala/RHS.** The rural health technicians (TSRs) provide preventive, promotive, and limited curative outreach services. They also supervise village-level promoters.

The problems of resistance from the established medical community, which occurs when non-physicians are assigned tasks traditionally reserved for doctors, is mentioned in program evaluations. However, little other in-

formation is given on projects' problems and successes in introducing new categories of mid-level personnel and assigning additional medical duties to others.

COMMUNITY HEALTH WORKERS

Training villagers to provide their communities with basic health care is a common strategy of PHC projects. Large segments of rural populations do not live within easy reach of health facilities, and even though new facilities may be constructed, these cannot be expected to cover large, dispersed populations adequately. Community health workers, therefore, offer a potential solution to the problem of reaching unserved populations. In addition, the use of community workers is presumably more cost-effective than the use of facility-based paraprofessionals. It is also expected that by using community members to deliver services, the social and cultural barriers which keep people from using health services can be overcome and communities can be stimulated to accept responsibility for their own health and well-being. Physical barriers to accessibility—distance, lack of transportation, and travel time—are also expected to be reduced by making CHWs' services available in villages.

In their plans to extend health coverage to rural populations, all but the Tunisia/RCH project and the two projects in Egypt are using CHWs. This section of the report examines functions assigned and performed (preventive and curative); the establishment of credibility; the generation of financial support; selection; training; and quality control—all factors which affect the success of efforts to use CHWs to increase health coverage.

Division of Labor

Among these projects, CHWs' responsibilities vary widely. (See Table 7, page 54.) Most of the programs have trained one person to perform a wide variety of promotive, curative, and preventive tasks—the full range of care provided at the village level. But a number of the projects have assigned curative functions to one kind of worker and promotive and preventive functions to another (or sometimes several types). In these projects, the different categories of workers function as a team.

Those programs that divide functions among different workers usually depend, at least in part, on volunteers. The use of this strategy probably reflects an attempt to limit the amount of time any one person must volunteer. The worker with preventive and educative functions usually is given much briefer training, and is expected to contribute less time and effort, than his curative counterpart. Among the programs that divide the functions of CHWs are:¹

- **Senegal/Sine Saloum.** Three different categories of village-level worker were originally created: first-aid workers, to treat common illnesses; hygienists, to promote envi-

ronmental sanitation; and traditional birth attendants, to provide antenatal and postnatal care and assist at deliveries.

- **Nepal/Integrated.** Two categories of CHWs have been trained. Village health workers undertake the bulk of preventive functions and provide some basic curative care. The community health leader helps motivate the community to participate in special health campaigns and family planning camps.

- **Honduras/Integrated.** The health guardian is responsible primarily for curative care, and the health representative for motivation and community organization.

- **Tanzania/Hanang.** The bulk of educational and curative care is provided by village health workers; the village health leader conducts health education classes and collects data.

In approximately 10 of the projects, functions have been divided by assigning the TBA such new duties as nutrition and health education, and well-baby care (Honduras/Integrated, Peru/Extension, and Yemen/Tihama); the collection of vital statistics (Thailand/Lampang and Niger/RHI); and family planning (Nicaragua/PRACS and Honduras/Integrated).

Although dividing functions may facilitate the workers' ability to provide the full range of health services, because each worker is responsible for learning and performing fewer tasks, this strategy brings with it problems in generating financial support, if any of the workers are to be compensated. Generally, neither governments nor communities can afford to finance two workers per village. In the few countries where the government pays CHWs' salaries, and where there is more than one category of worker (e.g., in Haiti and Nepal), there is only one salaried CHW—and this person has the bulk of responsibilities. The second member of the health team is a part-time volunteer, responsible primarily for occasional educational and promotive activities. Principally because of remuneration problems, a few volunteer-based programs have eliminated preventive cadres (e.g., in Senegal/Sine Saloum), or have considered eliminating them (e.g., in Honduras/Integrated, Tanzania/Hanang, and Thailand/Lampang).

- **Senegal/Sine Saloum.** After several months of operation, the project found that the community could not support three categories of workers. The project, redesigned in 1980, eliminated the hygienists, because the community considered them to be the most expendable group.

- **Honduras/Integrated, Tanzania/Hanang, and Thailand/Lampang.** Serious attention is being given to dispensing with the preventive workers.

Performance: Preventive and Curative Functions

Results from the field indicate that CHWs actually perform only a limited number of the tasks for which they are trained. A variety of sources indicate that the PHC workers concentrate on curative activities, to the neglect of preventive and promotive functions. The reasons for this are not clear. It may be that CHWs are assigned an impossibly large number of tasks, that their training or supervision is

¹Other projects are Korea/KHDI, Thailand/Lampang, Thailand/20 Province, Haiti/MCH-FP, Nicaragua/East Coast, and Peru/ORDE-ICA.

deficient, or that community demands and incentives largely determine what work CHWs carry out.

The average health worker is trained to execute a wide range of duties. (See Table 7.) In Thailand/20 Province, for example, the village health volunteer is responsible for providing basic curative care, including first aid, organizing educational events; providing basic health education; assisting in vector-control programs; weighing children; participating in programs to prevent endemic diseases, such as hookworm; and promoting sanitation.

Almost everywhere CHWs are expected to conduct educational activities. Nutrition activities are also common. In Botswana/HSD, Jamaica/Children, and Sudan/Northern and Southern, CHWs conduct nutrition demonstrations. In Indonesia/VFP-MCW, Nepal/FP-MCH, and Nicaragua/East Coast, CHWs help to monitor nutritional status by weighing children and monitoring progress. In Thailand/Lampang, workers help to set up kitchen gardens and feeding stations.

In most countries, CHWs are expected to play an important role in environmental health by promoting sanitation and better hygiene. CHWs in Panama/RHDS, Swaziland/RWBDC, and Philippines/PUSH organize campaigns to promote sanitation and provide adequate and safe water. In Thailand/Lampang, CHWs assist in constructing latrines.

Most programs include a wide range of maternal and child health (MCH) and family planning activities. In Yemen/Tihama, Philippines/PUSH and Bicol, and Lesotho/RHD, the CHWs play a major role in providing services to mothers and children. Many CHWs are expected to train mothers in oral rehydration, and sometimes CHWs are expected to work in school health programs. In many countries, CHWs are expected to motivate people to accept family planning. In approximately 25 percent of the projects, they also distribute contraceptives (e.g., Dominican Republic/Health Sector, Afghanistan/BHS, Nepal/FP-MCH, Guatemala/SINAPS, and Lesotho/RHD).

CHWs often are directed to promote immunizations, report communicable diseases, and assist in specific disease campaigns. The provision of first aid and the treatment of minor ailments are generally included in CHWs' tasks. Data collection (e.g., obtaining information on births and deaths) is often expected of CHWs. Finally, CHWs frequently are assigned additional community-development activities (e.g., assisting the community to develop income-producing projects.)

Without exception, project plans stress preventive care, but on the whole programs have experienced difficulty in delivering such services both at the village and health-facility levels. For example:

- **Niger/RHI.** An anthropological study found that village health workers rarely spend time doing anything other than dispensing medicines.
- **Afghanistan/BHS.** The project staff found it difficult to sustain village health workers' interest in preventive care, because the community was so eager for curative services.

Even though 50% of training time was devoted to preventive concepts, health workers engaged in few preventive and health education activities.

- **Bolivia/Montero.** A recent evaluation found that CHWs were neglecting preventive duties and concentrating on curative care.

From project implementation information, a number of reasons may be cited to explain the difficulty of instituting preventive and promotive activities: Popular demand is for curative care; traditionally health care has been curative; health personnel and the medical community are curative-oriented; and, in many projects, CHWs have a financial motivation to deliver curative care, because their income is tied to sales of drugs.

The forces acting against the institutionalization of preventive medicine are tremendous, especially for those programs that use CHWs remunerated by the communities. Communities, it seems, will only support those programs, or parts of programs, which they perceive as useful; few preventive activities are perceived to be so. Service mix has also been an issue for some programs with government-financed CHWs. Consequently, several programs that planned to omit curative services at the village level have had to amend their plans to be more in keeping with local demand. These included:

- **Honduras/Integrated.** In one of the project areas, CHWs were trained in preventive measures alone. However, after CHWs requested curative skills, the program was modified to provide training in both curative and preventive care. (CHWs are community-supported.)
- **El Salvador/RHA.** In the pilot project, village-level workers received training only in preventive medicine, but later they had to take on curative functions, so that they had the credibility they needed to perform their tasks. (CHWs are government-salaried.)
- **Sudan/Southern.** The original plan was that CHWs would have largely preventive and promotive roles. Given the strong community demand for curative services, however, the government made curative services the prime function of CHWs. (CHWs are government-salaried.)

Balancing community-perceived needs with professionally-determined needs has posed problems for many programs. On the one hand, communities are encouraged to define their needs and problems and to participate in efforts to solve them, on the other hand, health planners feel that they cannot responsibly accept a health program that focuses on the cure of health problems but neglects to address their causes.

Judging from the projects reviewed, it seems that programs that use paid CHWs are more likely to be delivering preventive services than programs that use volunteers. Evidence of significant preventive effort was found in a number of the former projects, including:

- **El Salvador/RHA.** A 1979 sample survey of 719 households served by rural health aides showed a 60% success rate in convincing families to use preventive services at

the nearby health post or health center. A 1978 survey of rural health aides in the Eastern Region found that these workers spent 24% of their time on preventive care, 44% on health education, and 32% on curative care.

- **Nepal/Integrated.** Although not an exact measure of work undertaken, a 1979 MOH survey presented information on what CHWs actually do. More than 75% of the village health workers reported undertaking family planning motivation, measuring arm circumference, and providing nutrition education. Between 50% and 75% reported making regular home visits for the purposes of rehydration education, leprosy case-finding, and sanitary education. Only 25%-50% reported undertaking curative care.

- **Philippines/PUSH.** The 1981 evaluation reported that the CHWs, who have only nominal curative functions, are carrying out preventive duties. Specifically, the CHWs are helping to control communicable diseases (largely by participating in immunization drives), weighing children under 6, making home visits to promote family planning (accomplishments are reported to be minimal), and assisting with the organization of sanitary infrastructure activities funded by the project.

Although there are important exceptions, these programs share two common characteristics. One, they have a special category of health worker whose duties are exclusively (or almost exclusively) preventive or educative. Two, the community-level health worker is a government employee and receives a regular salary. It is hypothesized that health workers with only preventive duties will assume the preventive and promotive functions they are paid to undertake. The salary, it appears, frees them from community demands to concentrate on curative care and permits them to deliver services to which the community does not give highest priority. Training CHWs in preventive care is itself no guarantee that such services will be delivered.

Credibility and Utilization

The credibility of CHWs as health providers and the level of demand for their services are important issues for PHC projects, especially those in which CHWs depend on financial support from the community. The few studies addressing these topics reveal a range of community attitudes, from skepticism of CHWs (in Haiti) to an apparent shift over time from skepticism to confidence in CHWs (in El Salvador).

- **Haiti/MCH-FP.** A 1979 evaluation noted that some villagers questioned the value of the community health agent's work because the agent's knowledge of sickness and health seemed only slightly better than their own.

- **Niger/RHI.** An anthropological study found that villagers continued to seek medical assistance from traditional healers, particularly for minor upsets and illnesses caused by spiritual possession. However, for other ailments, village health workers were sought because they were more accessible than the nearest government health facility.

- **Guatemala/RHS.** A 1979 Cornell University study of health paraprofessionals found that villagers trust the health promoters more than they do outsiders, but they have low expectations of what someone from their village can accomplish. The promoter (CHW) is perceived to have no special knowledge or resources.

- **Thailand/20 Province.** An evaluation team was told that the care provided by village health workers is better than none. Earlier, villagers were treated by traditional healers, who charge three to four times the cost of the drugs dispensed.

- **Honduras/Integrated.** A 1978 Ministry of Health (MOH) study and a 1980 anthropological study both found that the auxiliary nurse is the category of health provider most used in rural areas. However, although the communities have greater confidence in the auxiliaries than in the CHWs, the latter are heavily used when they have drugs, because they are more accessible. The MOH study also found that the degree of recognition and confidence in the CHW depends on how active this worker is in the community.

- **El Salvador/RHA.** A 1979 Ministry of Health evaluation indicated that all the rural health aides who were surveyed felt they were accepted by and useful to their communities. A concurrent community survey indicated that 84% of the village inhabitants saw the aides as helpful, primarily because of their curative functions. An earlier (1976) anthropological study found that acceptance of the paramedics was not automatic and seemed to depend on the perceived quality of training and the extent to which that training had been absorbed and practiced. Given even these conditions, community members indicated that services would be used only in an emergency and as a last resort.

Indirect measures of acceptability, such as caseloads of health workers and decreased attendance at health centers (because simpler cases are being treated at the village level), indicate that CHWs are being used, but they provide little perspective on what percentage of the population actually seeks health care from CHWs. (These issues are discussed in Chapter VII.)

The reports that were reviewed indicate that the availability of drugs strongly affects both the credibility and use of CHWs' services. Many projects report that demand for services virtually disappears when drug supplies run out. Although few of the projects provide quantitative information on this point, data from Honduras/Integrated illustrate the importance of drugs to the CHW. In this project, the number of persons seeking care from the CHW is reported to drop from an average of 62 for the months when drugs are available to an average of 8 once supplies are depleted.

The drugs given to the CHWs in some of the programs do not include the range required to treat some common health problems encountered in the communities. The result may be limited community support in these programs. Information collected from 30 projects shows that half of the programs provide CHWs with only nonprescription drugs, such as aspirin, cough medicine, oral re-

hydration solution, iron tablets, and contraceptives. Although the remaining projects provide health workers with anti-parasite medicines, preparations for eye infections, and anti-malaria drugs, only 10 of the projects also supply CHWs with antibiotics, such as penicillin, sulfa, and tetracycline.

None of the documents reviewed, with the exception of those for Afghanistan, offers a perspective on how responsibly CHWs dispense drugs. In Afghanistan/BHS, village-level workers were given 16 basic drugs, including piperazine, aureomycin, tetracycline, sulfa, and penicillin. After one year of program activities, observers of the project concluded that these drugs were being used properly.

If the provision of essential drugs to CHWs greatly improves these workers' perceived usefulness and credibility, other programs might well benefit from expanding the list of drugs which their village-level workers are authorized to dispense. Because drugs generally are available from pharmacies without prescriptions, there is probably little justification for limiting the drugs CHWs are authorized to use. In areas where pharmacists are firmly established as a source of modern medical care, one could expect that by giving a wider range of drugs to CHWs, the CHWs' competitive position would be strengthened vis-a-vis the druggists. Increasing the number of drugs which CHWs can officially dispense might also be important, because a number of programs, including Honduras/Integrated, have indicated that CHWs dispense other drugs and give injections "on the side." Thorough training of CHWs in dispensing drugs is critical, both to protect patients and because efforts to expand the CHWs' roles in prescribing drugs are strongly opposed by physicians and nurses in most countries.

The community's perception of CHWs' permanence also affects CHWs' acceptability and use. Communities that have been without ready access to modern medical services for generations do have a way to deal with health problems, whether it is using home remedies or seeking the help of traditional healers, druggists, and injectionists, for example. Long-established patronage of these persons is not likely to be changed immediately because a newly-trained CHW is present. It is expected, nevertheless, that credibility and acceptance will develop over time, as health workers become an accepted part of community life and as evidence of the value of their services accumulates.

Quality of Care

Many documents contain references to CHWs' providing effective health care following a brief period of training, and to communities' satisfaction with the health care they are receiving, but few offer solid evidence. The three studies of the quality of care that were identified provided mixed findings.

- **Afghanistan/BHS.** According to the final project report, repeated testing of VHWs in the field showed high levels of learning and retention.

- **Niger/RHI.** The 1980 AID evaluation found that the *secouristes* had a poor understanding of the basic concepts of sanitation, a subject in which they had been trained extensively. An earlier (1979) study by Tankary reported that many errors in the dosages of drugs prescribed were observed.

- **Mali/Yelimane-Koro.** A January 1980 performance study of 19 of the 26 village health workers trained in the Yelimane pilot zone showed that only 40% (8 workers) received a satisfactory score on the materials they had been taught a year earlier, and could be considered to be functioning at an acceptable level.

Incentives

Twenty-eight of the projects rely on volunteer CHWs who receive no salary and depend on the community, rather than the government, for any remuneration. (See Table 3). Most are "volunteers" only in the sense that they do not depend solely on their health activity for their livelihood, their income may derive from farming or other work. The plans of projects reflect the assumption that individuals will give substantial amounts of their time with little or no financial incentive. Planning documents, especially for the earlier projects, show little concern for the problem of how communities will finance their health workers, assuming, it seems, that a solution can be found readily. Experience shows that neither assumption is correct. Even volunteers require some compensation, and projects have yet to show that communities are able to finance their health worker, or even that they are convinced enough of their value, performance, and longevity to do so. (See Chapter III.)

The concept of volunteerism does not appear to exist in many countries, although in some (e.g., Thailand and Indonesia) there is a tradition of good works and reciprocal cooperation. Nevertheless, traditionally, the feeling has been that people are not expected to work without pay.

- In Honduras, for example, an anthropological study found that the idea of voluntary service is foreign to the culture: "Everyone knows and accepts that no one at any level works without pay or some other form of compensation."¹

- In Tanzania, where the government has promoted *Ujamaa*, a moral and humanitarian spirit of cooperation, there are reservations about a health system based on village volunteerism, because moral gratification and the obligation implied in *Ujamaa* are not enough to compensate for significant amounts of time without remuneration.

Many of the projects have reported that the CHWs have agreed to serve as volunteers with the expectation that a salary will be forthcoming. In Afghanistan/BHS, for example, during the one year that CHWs were in the field,

¹Gretchen M. Eolf, *Vista Socio-Cultural de la Salud Rural y la Entrega de Servicios de Salud—Mito y Realidad*, USAID/Honduras, May 7, 1980.

field staff never succeeded in convincing village health workers and communities that CHWs eventually would not receive a government salary. This common situation occurs because of attitudes toward volunteerism and because CHWs often are perceived by communities as part of the bureaucracy, and not part of the villages' efforts (the programs are government-initiated, and CHWs are trained and supervised by the government).

The question of incentives is particularly important, given the substantial amount of time that volunteers may devote to health duties and the out-of-pocket expenses they may bear.

- **Afghanistan/BHS.** It was estimated that village-level workers spent approximately 4-6 hours per day and saw 60-100 patients per month.¹
- **Honduras/Integrated.** It is reported that health guardians treat approximately 60 cases per month when they have drug supplies.
- **Mali/Yelimane-Koro and Thailand/Lampang.** Two studies (of the four which included information on the subject) showed that CHWs are not putting in substantial amounts of time. The study of CHWs in Mali/Yelimane-Koro found that the workers saw an average of 22 persons per month; Thailand/Lampang reported averages of 30 contacts per month in 1979 (numbers were lower for the preceding four years).

Aside from giving time, CHWs may spend money to attend monthly meetings, travel to a health center to pick up drugs, and perform other activities that are related to their principal duties. These expenses usually are not reimbursed. Several programs indicate that unreimbursed expenses are particularly rankling to CHWs. It may be one thing to ask health workers to provide services without pay, but quite another when their volunteer service costs them money.

Asking CHWs to provide preventive services without incentives has also posed problems. Rarely does the community provide an incentive, in the form of demand, recognition, or even moral support, for preventive efforts. Moreover, there are generally no financial incentives for non-salaried CHWs. In the community-financed programs that depend on profits from drug sales, the system of incentives promotes curative, and not preventive, health measures. The only way that village-level workers can earn money is by selling drugs.

The use of incentives is a strategy that has been used by programs that use volunteers to support preventive services. Incentives have been provided to foster demand for services and to encourage the delivery of specific preventive services by CHWs. Of the projects that were reviewed, the following uses of incentives have been identified:

- **Honduras/Integrated.** Several experiments to encourage preventive practices are under way. Although it is too early

¹This works out to nearly two hours per patient. Although this figure is high, it may indicate that the CHW must travel considerable distances to reach some patients.

to judge the effectiveness of these methods, the results should be of great interest. In one case, parasite medication, which is in high demand, is distributed only to those who have and use latrines. (Bolivia/Chiquitos is using the same technique.) In the other experiment, one kind of health worker is given quotas for well and latrine construction. Unfortunately, this has had the negative effect of reducing the collaboration of this worker with other local health workers.

- **Afghanistan/BHS.** The project was giving serious consideration to developing incentives to motivate CHWs to carry out preventive work before the program was terminated for political reasons.

Attrition

A number of documents speculate that the lack of fixed salaries is one reason for high attrition among CHWs in the programs that use community volunteers. Evidence from four projects illustrates this.

- **Senegal/Sine Saloum.** An evaluation of the project reported a 30% attrition rate during the first nine months of the program.
- **Honduras/Integrated.** Reports are that attrition rates range from 30% to 60% in different areas (the period of time is not indicated).
- **Niger/RHI.** The 1981 evaluation reports turnover rates of 10%; an earlier study showed rates as high as 50% in the first two years following deployment.
- **Mali/Yelimane.** In 1980, the project reported turnover rates of 22% during the first year of the program.

If other data confirm these trends, the volunteer-based programs may be experiencing significant losses of community confidence, and, in addition, be incurring extra training costs which will substantially increase the program's expenses. In contrast, it appears that programs with salaried community-level workers experience considerably lower turnover rates. The Dominican Republic/Health Sector and El Salvador/RHA projects both report "low" dropout rates. The former does not provide figures, and the second estimates that turnover is approximately 10%.

Other projects have found that supervision and regular drug supplies also play an important role in determining turnover rates. (See Chapter V.) The following examples illustrate the tendency. Low rates are associated with frequent supervision and drug supplies, and higher rates are associated with the lack of this support.

- **Guatemala/RHS.** A Cornell University study found that of the 3,000 CHWs who had been trained by 1978, only one-half were still working in 1979. The irregular and insufficient provision of drugs was cited as a major factor in the rate of turnover among CHWs and loss of community confidence. The study also found that the dropout rate was two to three times higher among unsupervised CHWs than among those with regular supervision. In the eyes of the community, the supervised CHW seemed to enjoy increased status because of the evident link to outside expertise.

● **Thailand/Lampang.** The project monograph on CHWs reported turnover rates of 18% for the first five years of the project. These low rates have been attributed to good guidance and support of the workers.

Training

Community members with no background in health can successfully complete their training. None of the project documents reports unsuccessful training courses. This is encouraging, because training persons with little formal education is challenging.¹ Even those programs with large numbers of illiterates (e.g., the Tanzania/Hanang, Kenya/Kibwezi, and Thailand/Lampang projects) have reported few problems. The numerous courses for TBAs also have successfully dealt with the difficulties of training illiterates, although these programs generally seek to impart fewer skills and less knowledge than programs for CHWs.

Table 7 indicates that the period of training for CHWs ranges from two days to ten months.² There is also substantial variation in the amount of initial training that different programs give to workers who are to perform similar functions. In the Senegal/Sine Saloum project, for example, workers receive three months of initial training in curative functions, first aid, and simple recordkeeping; in Afghanistan/BHS, a comparable category of personnel received three weeks of training.

Continuing education, although included in plans for many of the programs, is not always provided. Refresher courses, and even regularly supervised on-the-job training, have not taken place systematically in many of the programs. Infrequent follow-up training generally is attributed to the lack of resources and to the pressing need to train new workers.

CHWs in a number of projects have expressed a need for more training in curative medicine, so that a greater variety of functions can be undertaken (e.g., Thailand/Lampang, Honduras/Integrated, Nepal/MCH-FP, and Afghanistan BHS). Other areas for which additional training has been requested include first aid (e.g., Korea/KHDI) and community development and organization work (e.g., Thailand/20 Province).

Selection

Criteria for the selection of CHWs typically are established by the project staff rather than the communities or the local health committees. (See Table 7.) Literacy is virtually universal requirement. Other criteria are sex, marital status, trustworthiness, acceptability in the community, and willingness to serve the community. A few projects (e.g., Kenya/Kibwezi) have reported that selection is left entirely

to the community, with no minimum criteria established by program staff.

In approximately three-fourths of the projects, CHWs are selected by their communities. Either a general community assembly nominates candidates or, as is more common, the village health committee selects CHWs who fit certain fixed criteria. It appears that projects using volunteers generally rely on the community to select CHWs (Thailand/20 Province and Indonesia/VFP-MCW are exceptions). It also appears that salaried CHWs are likely to be selected by the MOH or project staff (e.g., Dominican Republic/Health Sector and Jamaica/Children), or by civil or MOH authorities who make a final selection from a list of candidates selected by the communities (e.g., Philippines/PUSH, Lesotho/RHD, El Salvador/RHA, and Philippines/Bicol). Some of the selection methodologies used in lieu of leaving the choice entirely up to the community are outlined below.

● **Thailand/Lampang.** A sociometric method was used to analyze communication patterns in households and to identify persons to whom others most frequently turn for advice. Success in applying the method varied. The method was dropped subsequently because it was too complicated and costly to administer.

● **Tanzania/Hanang.** Villagers nominated a number of candidates who were then tested and evaluated by the project staff. A standardized set of tests was used. Selection criteria included results of a non-verbal I.Q. test, results of a written composition, personal characteristics noted during planned activities, age, and marital status. (Presumably, illiterates were exempted from certain of these tests.)

● **Indonesia/VFP-MCW.** Staff selected volunteers on the basis of earlier active involvement in village family planning activities.

● **Philippines/PUSH.** The *barangays* each nominate five candidates. They are screened first by the municipal screening committee and then by the provincial screening committee, which makes the final choice.

It is not clear which selection method has been most successful. Programs, however, strive to select individuals who are capable of doing their job, respected by the community, motivated to carry out their work, interested in long-term service, and available and accessible to the community. There is widespread agreement that the choice of selection criteria is important to the CHWs' performance and length of service. The major issues appear to be literacy, credibility, and the sex of the worker.

1. Literacy

Literacy as a requirement definitely poses problems for some projects, because it disqualifies some of the most suitable persons—the older, more respected and stable members of the community, those people with a traditional orientation. A literacy requirement tends to disqualify traditional practitioners, those established and self-supporting health care agents whom some programs are trying to recruit. The requirement can contribute to rapid

¹A sixth-grade to eighth-grade educational level is a typical requirement for CHWs.

²The length of initial formal and inservice training for the principal categories of CHWs at the community level was obtained for 40 projects. The range is as follows:

Less than 5 Days:	2	5-12 Weeks:	22
5-10 Days:	3	More than 12 Weeks:	5
2-4 Weeks:	8		

turnover, because in societies where literacy rates are low, persons with even basic schooling have good job opportunities and are not likely to remain in rural communities and work as CHWs. In Senegal/Sine Saloum, for example, because of a French literacy requirement, those who were selected tended to be young men waiting for better employment opportunities in urbanized areas. Few had any intention of remaining in the community.

Other projects in countries with low literacy rates have found that when literacy is a selection requirement, recruitment of candidates must extend beyond the community. Not only are non-resident CHWs less knowledgeable about the community in which they work, but also, because they lack family connections and other sources of employment, they have to derive a more stable and sizable salary from their job as a CHW.

Illiteracy unquestionably poses problems. Training illiterates is difficult, as is training a mix of literates and illiterates (e.g., Mali/Yelimane, Niger/RHI, Tanzania/Hanang, Kenya/Kibwezi, and Thailand/Lampang). What is less certain is how effective illiterates are in the field compared to literates. The two groups' rate of retention of material may well differ, and without suitable reference guides and other refresher materials, illiterates may face distinct disadvantages in providing quality medical care over time. The results of limited evaluations of performance quality, including those of Mali/Yelimane and Niger/RHI, which trained some illiterates, are not encouraging. In Mali/Yelimane, a performance study of CHWs found that illiterates did not do as well as literates, leading the project staff to suggest that some degree of literacy should be required, even if it is only familiarity with numbers. In Niger/Diffa and RHI, where many CHWs are illiterate, two separate studies of CHWs found that CHWs' knowledge and practices were deficient. Neither project provided frequent supervision. This suggests that illiterates may require more personal contact supervision, whereas literates can be more effectively supervised with a blend of personal contact and written correspondence. If true, this has implications for the number of supervisors needed in each case.

2. Credibility

It is not clear how successful the projects have been in choosing CHWs who are respected in the community, who are perceived to be credible dispensers of health care and advice on health and related matters, and who have authority and leadership qualities. The very few projects that do provide information indicate that nepotism and politics often influence the choice of CHWs, whether they are selected by the community or by external organizations. The following are examples.

- **Philippines/PUSH.** Between 50% and 60% of the CHWs selected (by the various screening committees) were related to either *barangay* or municipal officials. The 1980 evaluation noted that they all were of uniformly high quality.

- **Niger/RHI.** An anthropological study conducted by Cornell University found that it was common for village headmen to choose a relative as a CHW; generally, this person was an unemployed younger male. By financing this relative, the headman hoped to gain the support of the community, and perhaps attract government funds and projects as a reward for cooperating with the program.

Just what impact politics has on the credibility of CHWs and their ability to mobilize the community is not evident. Being related to persons of influence may help a CHW to undertake certain tasks, such as mobilizing the community and instituting new habits. However, the community will not automatically have confidence in such a CHW's ability to provide health services.

In at least a few programs, the persons who were selected were the most expendable members of the community, and not necessarily the most suited to provide health care and to inspire confidence. In Afghanistan/BHS, for example, many were unemployed younger males with few prospects for other employment.

3. Sex

Approximately one-half of the projects have mostly male CHWs, which may make it difficult for them to deliver services to women and children. Of the 38 projects on which information was available, approximately 40%, either exclusively or primarily, use males; 23% use mostly females; and the remaining 37% use both males and females in an undetermined ratio. The sex of the health worker strongly influences both who will seek health care in the community and what kinds of tasks the CHW will undertake. Turnover rates and other important factors also are influenced by the sex of the CHW. It is, therefore, critical that project planners consider these issues, so that priority groups can be reached and problems can be addressed. For example, a program that uses male CHWs may be less likely to reach women and children with preventive and even curative care than a program that uses female CHWs. Six principal factors appear to be important in determining whether male or female CHWs are most appropriate in a given culture. They are:

Accessibility. In a number of cultures, females are clearly more successful than males in dealing with women clients, and training males may preclude access to health care for women and children. The difficulty in using male health workers to deliver services to women is mentioned in a number of projects, including Bolivia/Montero, Sudan/Northern and Southern, and Afghanistan/BHS. In Thailand/Lampang, however, male CHWs were found to be well accepted as providers of maternal and child health and family planning services.

Availability. A number of programs found that women are usually more available because they stay at home during the day while men work in the fields. In Honduras/Integrated, for example, it was found that the wives of the CHWs (*guardianes*) sometimes provided medical care when

the husbands were at work. Obviously, there are variances from country to country, depending on women's responsibility for field work. In Thailand, for example, women are engaged in agriculture and are also away from home.

Wages. The amount of compensation provided to CHWs may influence whether the community chooses men or women to be health workers. As the Nepal/MCH-FP project reports, in societies where there is widespread unemployment, paid jobs usually are given to men. Most of the other programs with government-salaried CHWs also employ males. Conversely, in Honduras/Integrated, where CHWs receive no compensation, the project staff observed that women were more likely than men to continue work as health providers in a purely voluntary capacity.

Acceptability. In many societies, females are more accepted than males as health providers, even where women are not prohibited from consulting male CHWs. According to a survey in El Salvador, for example, the communities preferred females, although the program had trained primarily males.

Mobility. In many societies, most notably in Muslim-dominated areas, women's physical mobility is restricted severely, and many of the duties commonly assigned to CHWs cannot be performed by women. For example, women may not be able to travel to a neighboring village to visit a patient, go to the health center to pick up drugs, or attend training sessions away from their villages.

Effectiveness. Several of the projects found that because of cultural roles, males and females are not equally effective. For cultural reasons, male health workers may be more effective in organizing preventive work that involves community mobilization (e.g., building latrines or small water systems). In El Salvador, for example, the female CHWs did not exhibit the same dynamism and self-assurance in undertaking community activities. They also were not effective in reaching male members of the rural population. (Community surveys nonetheless showed that females were preferred.)

A few programs have addressed the male-female question by training teams of males and females (e.g., Guatemala/PRINAPS and Tanzania/Hanang). This approach, however, may be prohibitively expensive because communities have had major problems supporting even one worker. Expanding the role of midwives is another tactic that has been used to ensure that the community has a female, as well as a male, health worker (e.g., Afghanistan/BHS and Yemen/Tihama).

Other issues concerning CHWs, namely, supervision and drug supply, are discussed in Chapter V; incentives are discussed further in Chapter III.

TRADITIONAL BIRTH ATTENDANTS

Twenty of the projects report that they have trained, or plan to train, traditional birth attendants. Not only are the TBAs' skills as midwives being upgraded, but many TBAs are also being trained to perform new duties and to function

as part of a community-level health team. In countries such as Afghanistan and Yemen, where cultural barriers inhibit women from receiving health care from males, midwives are expected to provide the bulk of health services to village women and children. In many programs, TBAs have been trained in such varied duties as recording vital statistics (Mali/Yelimane-Koro and Honduras/Integrated), advising on nutrition and family planning (Thailand/Lampang and Yemen/Tihama), and offering pre- and postnatal care (Central African Republic/Ouham, Mali/Yelimane-Koro, and Senegal/Sine Saloum). The limited information available from programs which use midwives to deliver a new range of services indicates mixed results. The following projects illustrate this point.

- **Afghanistan/BHS.** Preliminary evaluations indicated that trained midwives devoted considerable time to their new functions. Forty percent of midwives' patients were children, which indicated that these health workers were involved in providing more than pre- and postnatal care.

- **Niger/RHI.** Although trained to become significantly involved in prenatal care and child nutrition, midwives have not gone beyond their traditional role as birth attendants. An anthropological study suggests that the expansion of their role has created confusion among both the TBAs and the community, because traditional expectations about TBAs' role and suitable remuneration of these midwives are no longer clear.

OTHER COMMUNITY-LEVEL PRACTITIONERS

A number of programs have reported that traditional practitioners have been selected by the community to serve as CHWs, but this resource rarely has been used systematically. A few projects, such as Yemen/Tihama, report having an active policy to bring traditional health practitioners into their programs. The ministries of health in Nepal and Botswana have expressed an interest in systematically integrating traditional healers into ministry programs.

If traditional healers respond well to new training and if they can adapt their treatments to fit modern concepts of medicine, this category of health worker could potentially be a valuable resource for community programs. Traditional healers are popularly accepted and are established health care providers. Moreover, they are self-financed, because the community is accustomed to supporting them, and their fees are well-adapted to village reality, because payments can be made in cash and in kind. Deferred payments also are acceptable.

In some areas, the healers provide the bulk of health care, and the CHW will have to compete with this already established source of care. The community may not be able to support both the healer and the CHW adequately. The potential conflict between the two groups may be especially great in countries with well-established indigenous health care systems, such as those in the following countries.

- In **Thailand**, herbalists who have undergone formal training are licensed by the Ministry of Public Health.

These traditional practitioners have a long tradition of herbal practice that originated in India and China, and they have excellent credibility in the communities.

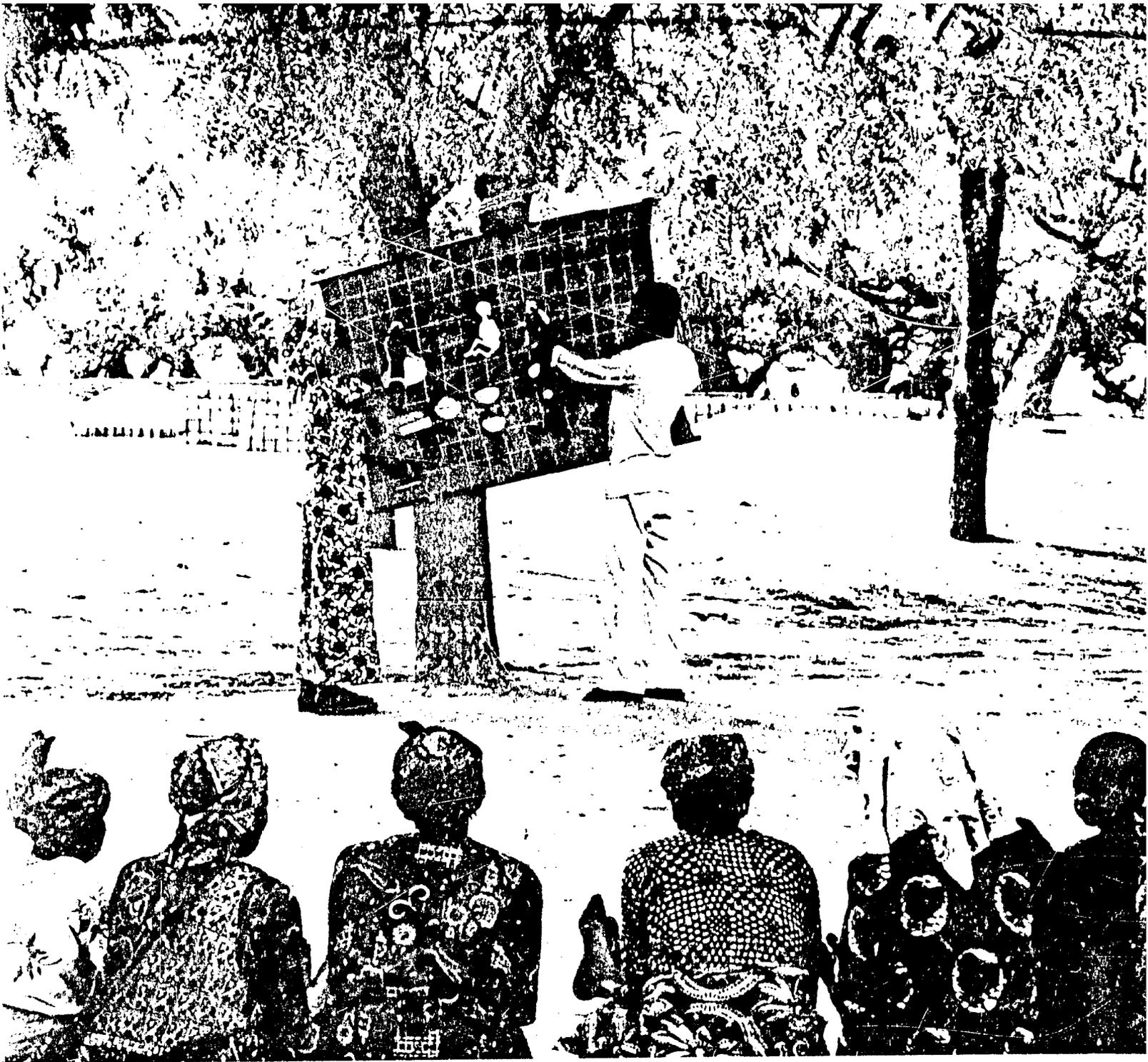
- In **Lesotho**, medicine men and herbalists are licensed by the government and are well-entrenched in villages where CHWs will be trained.
- In **Nepal**, non-Western health care is widely available, even in rural areas, and it is routinely used.
- In **Mali**, the government has organized traditional healers into professional associations to try to regulate these widely-used health care agents. Some have been incorporated into the AID project.

Pharmacists are another common source of health care in rural areas. In many countries, druggists provide a substantial proportion of health care. The 1972 baseline study for the Korea/KHDI project, for example, found that 75% of those who suffered from acute diseases were not treated at medical institutions, but took medicines prescribed by druggists or recommended by friends. Similarly, studies in Thailand/Lampang found that villagers generally seek, as their first choice, medical care consultation from drug sellers. Despite this fact, pharmacists have been brought into few PHC programs. Four projects have been identified that train rural pharmacists, and the results of this activity should be useful in determining the extent to which pharmacists can be used as a resource in other PHC programs. The projects are:

- **Kenya/Kibwezi**. This project trained shopkeepers in simple diagnostic procedures.
- **Korea/KHDI**. The project undertook to upgrade the training and standards of practice of druggists.
- **Thailand/Lampang**. Druggists have been trained to advise on the use of oral rehydration treatments and contraceptives.
- **Egypt/SHDS**. Brief training was given to druggists to enable them to advise on the use of oral rehydration solutions.



Health workers use a flannelgraph as an aid in training midwives



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Table 7 COMMUNITY HEALTH WORKERS

ASIA

<i>Projects by Region and Country¹</i>	<i>Name of Worker (FT = full time) (PT = part time)</i>	<i>Date Deployed</i>	<i>Number Trained/Planned</i>	<i>Length of Training</i>
Indonesia/VFP-MCW	Village Nutrition Cadre Member (PT)		Planned: 150,000 (20 per village)	3 days
Korea/KHDI	Village Health Agent (PT)	1978	Planned: for all vil- lages, but cut back	2 days
	Community Health Aide (FT)	1978	1979: 106	8 weeks
	TBA (PT)	1978		
Nepal/FP-MCH	Panchayat-Based Health Worker (FT)	1978	1980: 714	
Nepal/Integrated	Village Health Worker (FT)	1975 (?)	1979: 1,522	6 weeks
	Community Health Leader (PT)		Planned	12 days plus inservice
Pakistan/BHS	Community Health Worker	1981	1980:300 Planned: 48 (amended from 1,350)	3 months
	TBA			
Philippines/Bicol	Barangay Health Aide (FT)		Planned: 400	6 weeks plus 2 weeks supervised field work
	TBA (PT)		Planned	1 week inservice every 6 months
Philippines/PUSH	Barangay Health Aide (FT)	1980	1980: 150 Planned: 600	6 weeks plus 2 weeks supervised field work; 2 weeks additional training every 6 months

¹The following projects are not listed because they do not have a CHW component: Tanzania/School Health, Haiti/SHS, Swaziland/HMT, Tunisia/RCH and both Egypt projects. Strengthening Health Delivery Systems in Central and West Africa (SHDS) is not included because it deals with so many different countries. It should be noted that project data are of varying completeness and are not all for the same year.

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Scope of Duties	Drugs	Incentives ²	Personal Characteristics
<ul style="list-style-type: none"> ● Nutrition and family planning motivation/education; weighing children under 5; participating in <i>taman gizi</i> (cooking and feeding) sessions ● Following-up malnourished children 	Oralyte, Iron pills, vitamin A, deworming medication	Volunteer; plan to give special uniform, village seed banks, and tools	<ul style="list-style-type: none"> ● Female ● Existing family planning workers to be retrained ● Selected by project staff
<ul style="list-style-type: none"> ● Promotion and education 	None	Volunteer: no information on whether remuneration received	<ul style="list-style-type: none"> ● Mostly female
<ul style="list-style-type: none"> ● MCH; FP; immunizations; health and nutrition education; sanitation ● Curative care; TB control ● Supervising Village Health Agents 		Government salary: in 1 of the 3 project areas (Okgu), receive payment from community through pre-paid insurance scheme	<ul style="list-style-type: none"> ● Mostly female
Fees			
<ul style="list-style-type: none"> ● FP/MCH services; health, nutrition and sanitation education; measuring arm circumference; home visits ● Simple curative care: diarrhea, scabies, eye infections, anemia; leprosy and smallpox case-finding and follow-up 	Contraceptives (pills and condoms), multi-vitamins, iron pills	Government salary (approx. \$17/month)	<ul style="list-style-type: none"> ● 85% male ● Recruited on basis of interest, status in village, natural leadership abilities, and motivation
<ul style="list-style-type: none"> ● Mostly preventive duties, but plan to introduce basic curative care 	Aspirin, chloroquine, iron pills, aureomycin, piperazine, vitamins	Government salary (approx. \$17/month)	<ul style="list-style-type: none"> ● Male ● Must have 8th grade education ● Be 18-35 years old
<ul style="list-style-type: none"> ● Health education; assisting in campaigns ● Assisting with emergencies 		Volunteer	<ul style="list-style-type: none"> ● Mostly male
<ul style="list-style-type: none"> ● Weighing children; FP; DPT and BCG immunizations; health, nutrition, and sanitation education and advice 	Initially, first aid supplies, contraceptives	Volunteer: plan to experiment with ways to pay CHWs, including fees for curative services and drug profits	<ul style="list-style-type: none"> ● Mostly male, although 50% female is goal
Fees			
<ul style="list-style-type: none"> ● Health and nutrition education FP; sanitation 		Government salary (approx. \$50/month)	<ul style="list-style-type: none"> ● Males and females ● 6th grade education or equivalent required ● Recommended by barangay council and then appointed by MOH
Fees			
<ul style="list-style-type: none"> ● Promoting environmental sanitation, FP, health education, keeping weight charts on babies; assisting in immunizations ● Disease referrals ● Vital records ● Community organization 	Contraceptives	Government salary (approx. \$50/month)	<ul style="list-style-type: none"> ● Males and females ● High school graduation (formerly 8th grade completion) required ● At least 21 years old ● Residents at least 5 years ● Selected on basis of personal characteristics (e.g., honesty, integrity, leadership, imagination, organizational skills) ● CHC nominates 5 or more candidates, provincial government screening committee makes final selection

²See Table 6 for more detailed information.

Abbreviations: CHC = community health committee; FP = family planning; MCH = maternal and child health; ORT = oral rehydration therapy; TB = tuberculosis; VHC = village health committee; VHV = village health volunteer.

<i>Projects by Region and Country</i>	<i>Name of Worker (FT = full time) (PT = part time)</i>	<i>Date Deployed</i>	<i>Number Trained/Planned</i>	<i>Length of Training</i>
Thailand/Lampang	Health Post Volunteer (PT)	1975	1980: 901 Planned: 680	2 weeks plus 1 day in-service every 6 months
	Health Communicator (PT)	1978	1980: 5,363 Planned: 6,000	2 days
	TBA (PT)	1978	1980: 352 Planned: 340	2 weeks plus annual refresher course
Thailand/20 Province	Village Health Volunteer (PT)	1975	1979: 4,700 Planned: 6,000	20 days
	Village Health Communicator (PT)	1978	1979: 46,946 Planned: 79,000	5 days
LATIN AMERICA				
Bolivia/Montero	Health Promoter	1977	1979: 43 Planned: 80	8 weeks (60 hours)
	TBA			
Bolivia/RHDS	Same information as for Montero			
Bolivia/Chiquitos	Rural Health Collaborator (PT)	1978	1979: 281 Planned: 85	1 month (divided into 2 courses)
	TBA		Planned: 30	
Dominican Republic/Health Sector	Promoter (FT)	1976	1980: 4,700	3 weeks
El Salvador/RHA	Rural Health Aide (FT)	1976	1978: 265 Planned: 640 (originally 1,550)	10 weeks plus 2 weeks annual in-service

<i>Scope of Duties</i>	<i>Drugs</i>	<i>Incentives</i>	<i>Personal Characteristics</i>
<ul style="list-style-type: none"> ● Promotion and information: FP, nutrition (weighing children); MCH; environmental sanitation ● Simple curative care, first aid ● Supervising Health Communicators ● Coordinating government activities in community ● Recording health activities 	Malaria and TB drugs, non-prescription drugs, contraceptives (pills and condoms), dressing kit	Volunteer: profits from drug sales (approx. \$1.00/month) plus donations for contraceptives; free health care for self and family	<ul style="list-style-type: none"> ● 80% male ● 85% have less than 4 years of education; some illiterates ● 70% over 30 years old ● Established members of community, often farmers/shopkeepers ● Selected by CHC (initially used sociometric methods in some areas)
<ul style="list-style-type: none"> ● Disseminating health information ● Promoting health services ● Reporting births, deaths, and migration 	None	Volunteer: free medical care for self and family	<ul style="list-style-type: none"> ● 64% male ● Usually younger than health post volunteers ● 85% have less than 4 years education; 2% are illiterate ● Local resident, often member of CHC; mostly farmers ● Selected by CHC
<ul style="list-style-type: none"> ● Advising on available health services and on nutrition; promoting FP; distributing contraceptives ● Assisting in deliveries; detecting and referring abnormal pregnancies ● Reporting births 	Condoms and pills	Volunteer: fees, free medical care for self and family	<ul style="list-style-type: none"> ● Female ● Older (34% over 40 years old) ● Selected by local health officials
<ul style="list-style-type: none"> ● Organizing educational events; giving basic health education; assisting in vector control and endemic disease programs; promoting sanitation, FP, immunizations; assisting in feeding sessions ● Providing basic health care, first aid ● Assisting with kitchen gardens 	Contraceptives, aspirin, vitamins, anti-septics, sulfonamides, OR mix, skin ointments	Volunteer: drug profits; free medical care for self and family	<ul style="list-style-type: none"> ● 70% male ● Literacy required (8 years basic education) ● Certain VHC members selected for VHV training
<ul style="list-style-type: none"> ● Organizing educational events; giving basic health education; assisting in immunization programs; encouraging use of facilities 	None	Volunteer	<ul style="list-style-type: none"> ● Mostly male ● Literacy required ● Selected on basis of household surveys (those most sought after for advice)
<ul style="list-style-type: none"> ● Individual and group health education; growth monitoring; hygiene, sanitation demonstrations; vaccinations; latrine construction ● Simple curative care 	Aspirin, vitamins, iron pills, chloroquine	Volunteer: community decides on type of compensation—usually drug profits (approx. \$20 during good periods)	<ul style="list-style-type: none"> ● Approx. half male/half female ● 2-3 candidates selected by CHC; MOH project team makes final selection
Fees			
<ul style="list-style-type: none"> ● Environmental sanitation promotion; follow-up of mobile health team ● First aid ● Recording vital statistics ● MCH and nutrition ● Tuberculosis control 		Volunteer: receive drug profits	<ul style="list-style-type: none"> ● Both sexes, but may be more males ● Literacy required
Fees			
<ul style="list-style-type: none"> ● Promoting breastfeeding, prenatal care, immunizations ● Identifying malnourished children: ORT ● Treating simple health problems ● Recording births and deaths ● Cooperating with midwives 	Aspirin, cough medicine, antidiarrhetic, iron pills, contraceptives, OR mix, mebendazole, ophthalmologic tetracycline ointment	Government salary (\$30/month)	<ul style="list-style-type: none"> ● Mostly female ● Literacy required ● Community resident, selected by CHCs
<ul style="list-style-type: none"> ● FP; pre- and postnatal care; promoting nutrition, hygiene, accident prevention, and environmental sanitation ● Basic curative care, first aid ● Registering births and deaths ● Supply control 	Ointments, aspirin, antidiarrhetic, contraceptives, tetracycline, mebendazole, OR mix	Government salary (approx. \$110/month)	<ul style="list-style-type: none"> ● 2/3 male ● 6th grade education required ● 18-40 years old ● Accepted by community ● Must be in good health, able to pass required training exam ● Selected by regional MOH personnel in consultation with communities

Projects by Region and Country	Name of Worker (FT = full time) (PT = part time)	Date Deployed	Number Trained/Planned	Length of Training
Guatemala/PRINAPS	Rural Health Promoter (PT)	1981	Planned: 400	4 weeks (also experimental 3 week self-instruction)
Guatemala/RHS	Promoter		Planned: 10,000	
Guatemala/SINAPS	Rural Health Promoter (PT)	1980	1980: 385	1 day/week for 3 months
	TBA		Planned: 200	
Guyana/RHS	Community Health Worker (PT)	1979	1980: 234	4-6 weeks
Haiti/MCH-FP	Health Agent (PT)	1978	1979: 540	3 months
	Community Agent (PT)	1979	1979: 140	1 month
Haiti/RHDS	Health Agent (PT)	1980	1980: 300	6-8 weeks
Honduras/Integrated	Health Guardian (PT)	1974	1980: 1,800	5-6 days
	Health Representative (PT)	1974	1980: 800 Planned: 5,000 Guardians and Representatives	3-6 days
	TBA (PT)	1975	1981: 4,000	6 days plus one day/month for 11 months (since 1978)
Jamaica/Children	Community Health Aide (FT)	1967	1981: 2,000	2 months
Nicaragua/PRACS and Rural Health	Rural Health Collaborator (PT)	1976	1980: 45	2 months
	TBA (PT)			5 days

Scope of Duties	Drugs	Incentives	Personal Characteristics
<ul style="list-style-type: none"> ● FP; health education; assisting with growth monitoring, nutrition, and vaccination campaigns ● ORT, first aid ● Conducting census 	Oralyte, vitamins, aspirin, piperazine, mebendazole, contraceptives, first aid supplies	Volunteer: exempt from military service	<ul style="list-style-type: none"> ● Male-female teams ● Literacy required ● Local resident, recognized by community ● Selection process varies; some promoters suggested by community leaders, others because they were former promoters
<ul style="list-style-type: none"> ● Preventive activities ● Limited curative health services; referring sick to nearest health post ● Initiating and guiding community health activities 		Volunteer: exempt from military service	<ul style="list-style-type: none"> ● Chosen by CHCs
<ul style="list-style-type: none"> ● Same as PRINAPS, plus home visiting 	Oralyte, piperazine, expectorant, anti-septics, aspirin, contraceptives, first aid supplies	Volunteer: receive donations for contraceptives; exempt from military service	<ul style="list-style-type: none"> ● Mostly male ● Chosen by CHCs
Fees			
<ul style="list-style-type: none"> ● Health education, breast feeding, personal hygiene, immunizations; promoting environmental sanitation ● Simple curative care ● Referrals 		Government salary	<ul style="list-style-type: none"> ● Primary school education required ● Must be respected community member ● Preferably middle-aged ● Selected by community
<ul style="list-style-type: none"> ● MCH/FP; environmental sanitation 	OR mix, vitamins, iron pills, contraceptives, penicillin, chloroquine, entidiarrhetic	Government salary (approx. \$50/month)	<ul style="list-style-type: none"> ● Female ● Traditional healers encouraged
<ul style="list-style-type: none"> ● Health promotion 	None	Volunteer: receive gratuities	<ul style="list-style-type: none"> ● Male and female
<ul style="list-style-type: none"> ● FP; nutrition; prenatal care; immunizations ● Simple curative care, including ORT 	OR mix, iron pills, aspirin, vitamins, contraceptives, chloroquine, penicillin	Government salary (approx. \$50/month)	<ul style="list-style-type: none"> ● Male and female ● Must be resident of community for 5 years, be approved by community, have interest in community health activities, be able to speak Creole.
<ul style="list-style-type: none"> ● Well-baby advice; health and nutrition education ● First aid, simple curative care (diarrhea, colds, parasites) 	Aspirin, cough medicine, piperazine, expectorant, antispasmodic, merthiolate, peroxide, OR mix	Presently no compensation	<ul style="list-style-type: none"> ● Male and female ● Literacy required (6 years education preferred) ● Must be at least 18 years old ● Selected by CHCs
<ul style="list-style-type: none"> ● Promoting environmental sanitation, home improvement ● Motivation and community organization; community gardens 	None	Volunteer	<ul style="list-style-type: none"> ● Mostly male ● Must be at least 18 years old; generally older than health guardians ● Selected by CHCs
<ul style="list-style-type: none"> ● Postnatal and well-baby care; FP; referrals ● Attending births ● Collecting vital statistics 	UNICEF Kit	Fees (\$2.50-\$15.00/delivery)	<ul style="list-style-type: none"> ● Mostly female ● Recruited by health guardians and health representatives
<ul style="list-style-type: none"> ● Home visits ● Assisting in health center; nutrition, health and dental education, monitoring of nutritional status, promoting environmental health and child health, immunizations, FP ● Follow-up of endemic disease cases; first aid ● Community surveys ● Food distribution; community organization 	Non-prescription (antiseptics, skin ointments) and food supplements	Government salary (\$135/month)	<ul style="list-style-type: none"> ● Female ● Have primary education ● Selected by project managers
<ul style="list-style-type: none"> ● Basic preventive services ● Basic curative services ● Community organization (assisting in identifying health problems and initiating collective solutions) 	Medicine kit	Volunteer: compensation is planned	<ul style="list-style-type: none"> ● Mostly young females although some males ● Literacy required
<ul style="list-style-type: none"> ● Prenatal care; nutrition; FP ● Attending births 	OR mix, mebendazole, vitamins, aspirin, contraceptives	Fees and mark-up on drugs	<ul style="list-style-type: none"> ● Mostly male ● Mostly older, established ● Literacy required ● Selected by CHCs

Projects by Region and Country	Name of Worker (FT = full time) (PT = part time)	Date Deployed	Number Trained/Planned	Length of Training
Nicaragua/East Coast	Health Leader (PT)		1976: 35	1 week with occasional inservice
	Nutrition Leader (PT)		1976: 35	1 week with occasional inservice
	TBA (PT)			1 week every 4 months
Panamá/RHDS	Health Assistant (FT)	1977	Planned: 300	6 months of classes plus 6 months of field work
Peru/Extension	Promoter		Planned: 4,300	4 weeks
	TBA (PT)		Planned: 4,300	2 weeks
Peru/ORDE-ICA	Promoter (FT)	1980	1981: 12 Planned: 1,600	2 months
	Sanitarian (FT)	1980	1981: 45 Planned: 100	7 months
Botswana/HDS	Family Welfare Educator (FT)	1971 (national program)	1980: 100 Planned: 60-90 each year	3 months
Central African Republic/Ouham	Village Health Care Agent	1979	1979: 5 Planned: 20	
	TBA; Traditional Healer	1979	1979: 50 Planned: 1,000	
Kenya/Kibwezi	Community Health Worker (PT)	1980	1980: 41	Varies with individual (PT)
Kenya/Kitui	Community Health Worker "Health Expert"	1979	1980: 27	7-20 days
	TBA	1979	1980: 14	Short course
Lesotho/RHD	Village Health Worker (PT)	1981	1981: 104 Planned 1,000	3 months
Mali/Yellmane Koro	Village Health Worker	1980	1980: 59	5 days
	TBA (PT)	1980	1980: 8	

AFRICA

<i>Scope of Duties</i>	<i>Drugs</i>	<i>Incentives</i>	<i>Personal Characteristics</i>
<ul style="list-style-type: none"> ● Preventive activities ● Curative activities 		Volunteer: small income from drug sales.	<ul style="list-style-type: none"> ● Mostly female ● Selected by CHCs
<ul style="list-style-type: none"> ● Preventive activities; weighing children; education 	None	Volunteer	<ul style="list-style-type: none"> ● Female
<ul style="list-style-type: none"> ● Health education ● Attending births 		Fees	<ul style="list-style-type: none"> ● Female
<ul style="list-style-type: none"> ● MCH/FP; vaccinations; environmental sanitation ● First aid ● Community development; assisting in organizing construction of infrastructure projects 		Government salary: (\$60-100/month in 1976)	<ul style="list-style-type: none"> ● Mostly female ● Literacy required (primary school completed) ● Community residents ● At least 18 years old ● Good health, able to travel
<ul style="list-style-type: none"> ● Immunizations; FP advice and assistance ● Basic curative services 	Some simple drugs	Volunteer: no information on compensation	
<ul style="list-style-type: none"> ● MCH ● Attending births 		Fees	
<ul style="list-style-type: none"> ● Basic FP services; immunizations; health education 		Volunteer: receive drug profits	
<ul style="list-style-type: none"> ● Curative services ● Community organization 		Government salary	
<ul style="list-style-type: none"> ● Health education; FP; dental health promotion; nutrition education in schools; screening for malnutrition and immunization gaps; promoting of immunizations ● First aid, ORT ● Vital statistics ● Some development activities 	Analgesic, vitamins, iron pills, OR mix, skin ointments, cough mixtures, anti-TB drug	Government salary	<ul style="list-style-type: none"> ● Male and female ● Primary education required ● 20 years and older ● Selected by the local district or town council
		Volunteer	
<ul style="list-style-type: none"> ● MCH ● Attending births 		Fees	
<ul style="list-style-type: none"> ● MCH/FP; health promotion including environmental sanitation, water control, nutrition, personal and community hygiene ● First aid; treat minor illnesses; communicable disease control ● Recordkeeping; community surveys ● Community organization: digging wells, building water catchments, better farming methods 		Volunteer: remuneration from community planned	<ul style="list-style-type: none"> ● Half male/half female ● Some illiterates ● Some traditional healers, midwives, older farmers, etc. ● Criteria for selection varies: commonly, average age over 20, responsible, able to work independently with limited supervision, willing to work as a volunteer, active in the community, interested in health care.
<ul style="list-style-type: none"> ● Nutrition ● Curative care, midwifery 		Volunteer: fees for curative services and MCH care	
		Fees	
<ul style="list-style-type: none"> ● Developing safe water supply and sanitation systems; promoting good nutrition, MCH/FP, child care, personal hygiene ● Assisting controlling outbreaks of disease; identifying and managing common clinical problems; preventing/managing vomiting and diarrhea; referring TB and leprosy patients; providing first aid; collecting vital statistics; identifying village health problems 	Contraceptives and some basic drugs	Government salary	<ul style="list-style-type: none"> ● Mostly female ● Literacy required ● Local residents ● Selected by villagers with advice from MOH personnel
<ul style="list-style-type: none"> ● Simple curative care, first aid ● Run pharmacies ● Preventive care to be emphasized in retraining 	Aspirin, chloroquine, penicillin, eye drops, ganidan	Volunteer: some receive drug profits and/or non-monetary compensation	<ul style="list-style-type: none"> ● Males ● Must have "good character," be respected by others, have confidence of villagers, intend to remain in village ● Chosen by villagers
		Fees	<ul style="list-style-type: none"> ● Female

<i>Projects by Region and Country</i>	<i>Name of Worker (FT = full time) (PT = part time)</i>	<i>Date Deployed</i>	<i>Number Trained/Planned</i>	<i>Length of Training</i>
Mauritania/Trarza	Community Health Worker (PT)	1981	1981: 70 Planned: 200	6 weeks plus inservice
Niger/Niffa and RHI	Secouriste (PT)	Since 1960s	1980: 16,835 Planned: 19,500	10-15 days
	Matrone (PT)	Since 1960s	1980: 3,225 Planned: 6,000	10-15 days
Senegal/Sine Saloum	Secouriste (PT)	1979	For all categories of village personnel: 1980: 1,200 Planned: 1,800	24 days
	Matrone (PT)	1979	See above	12 days
	Hygienist (PT)	1979	See above	12 days
Sudan/Northern	Community Health Worker (FT)	1976	1979: 1,200	9 months
	Nomadic Community Health Worker (FT)			
Sudan/Southern	Community Health Worker (FT)	1979	1979: 100	9 months
Swaziland/RWBDC	Rural Health Visitor	1976	Planned: 1 per 400 population	9 weeks
Tanzania/Hanang	Village Health Worker	1978	1978: 94 Planned: 169	10 months (2 months initially)
	Village Health Leader (PT)		1978: 43 Planned: 48	
Zaire/HSD	Promoter	Never deployed		

Scope of Duties	Drugs	Incentives	Personal Characteristics
<ul style="list-style-type: none"> ● MCH; health education ● Curative care; referrals ● Surveys ● Community mobilization 	About 10 basic drugs	Volunteer: receive drug profits or family contributions	<ul style="list-style-type: none"> ● Male and female ● Literacy not required but must be able to learn quickly ● Permanent resident, between 25-40, be willing to work as volunteer ● Selected by CHCs
<ul style="list-style-type: none"> ● Patient records ● Preventive care; promoting personal and environmental hygiene ● First aid; malaria treatment and prevention 	Aspirin, ganidan, nivaquine, paregoric, enteric sulfamide, aureomycin, etc.	Volunteer: non-monetary compensation is common	<ul style="list-style-type: none"> ● Male ● Literacy not required ● Aged 15-40 ● Often older, less educated community members; many traditional healers ● Selected by communities ● Willing to work as volunteers, live in the village
<ul style="list-style-type: none"> ● Pre- and postnatal care; promoting personal and household hygiene ● Attending and recording births 	UNICEF kit	Fees	<ul style="list-style-type: none"> ● Female
<ul style="list-style-type: none"> ● Assisting in immunization campaigns ● Diagnosing and treating common illness; referring more serious cases; giving first aid ● Helping maintain death and birth records ● Managing village health units, payments 	Aspirin, chloroquine, iron pills, piperazine, aureomycin, ascabiol, nivaquine, OR mix	Volunteer: share of health hut income (from drug sales and fees)	<ul style="list-style-type: none"> ● Male ● Earlier, had to be literate in French ● Usually not from village, single, with some formal education, 25-35 years old (earlier in the project) ● Replacements for securistes who left for other jobs often older, married landowners, not necessarily literate in French
<ul style="list-style-type: none"> ● Providing pre- and postnatal care; educate on personal hygiene and nutrition ● Attending births 		Volunteer: share of health hut income (from drug sales and fees)	<ul style="list-style-type: none"> ● 75% are older women
<ul style="list-style-type: none"> ● Promoting personal hygiene and environmental sanitation ● Organizing voluntary work for environmental sanitation improvement 		Volunteer: share of health hut income (from drug sales and fees)	<ul style="list-style-type: none"> ● Male and female ● Typically married, 25-30 years old, little or no formal education, full-time cultivators
<ul style="list-style-type: none"> ● Health and nutrition education; promoting environmental sanitation; promoting and assisting in immunization campaigns ● Surveillance and following of endemic diseases ● First aid, limited curative care, oral rehydration ● Vital statistics ● Community and development activities 	Aspirin, vitamins, iron pills, antimalarials, sulfonamides, antibiotics, eye ointments, skin ointments, OR mix, cough mixture	Government salary	<ul style="list-style-type: none"> ● Mostly male ● 9 years basic education required ● Selected by CHCs or existing self-help groups
<ul style="list-style-type: none"> ● Same as above 	Same as above	Government salary	<ul style="list-style-type: none"> ● Male ● Selected by clans' nomadic councils
<ul style="list-style-type: none"> ● Same as above 	Same as above	Government salary	<ul style="list-style-type: none"> ● Mostly male ● 9 years basic education required ● Selected by communities
<ul style="list-style-type: none"> ● MCH; nutrition; environmental sanitation ● Curative care 		Government salary	<ul style="list-style-type: none"> ● Female ● Selected by communities
<ul style="list-style-type: none"> ● FP information and services; health education; address food, water, and sanitation problems ● Simple curative and first aid ● Collecting health data ● Training Village Health Leaders ● Agricultural extension 	First aid boxes in some villages	Volunteer: about 50% paid by communities (cash or in-kind)	<ul style="list-style-type: none"> ● Male/female teams ● Must be village resident ● Originally had to pass written test but requirement apparently dropped ● Villagers nominate candidates; project staff makes final selection
<ul style="list-style-type: none"> ● Initiating health education classes ● Collecting monthly disease data 	None	Volunteer	<ul style="list-style-type: none"> ● Selected by villagers
		Volunteer: compensation planned	

NEAR EAST

<i>Projects by Region and Country</i>	<i>Name of Worker (FT = full time) (PT = part time)</i>	<i>Date Deployed</i>	<i>Number Trained/Planned</i>	<i>Length of Training</i>
Afghanistan/BHS	Village Health Worker (FT)	1977	1979: 137 Planned: 10,000	3 weeks plus 3 days of inservice every 3 months
	TBA (PT)		Planned: 15,000	5 weeks
Yemen/Tihama	Primary Health Care Worker (FT)	1981	Planned: 750	22 weeks
	TBA (PT)			14 weeks

A community committee in Cuba designates a member who is responsible for a long list of health activities.



Scope of Duties	Drugs	Incentives	Personal Characteristics
<ul style="list-style-type: none"> ● Detecting and preventing child malnutrition; teaching weaning practices, hygiene and sanitation; FP services ● First aid and simple curative care ● Food storage 	16 basic drugs, including tetracycline, piperazine, penicillin, sulfa, vitamins, eye ointment, OR mix, contraceptives	Volunteers: profits from drug sales (approx. \$5.00/month)	<ul style="list-style-type: none"> ● Mostly male ● Literacy required ● Typically young, underemployed; also mullahs, shopkeepers, and traditional healers ● Must be able to spend 4 hours/day as VHW, live at least 10 km. from a basic health center, be accepted by all factions of the village ● Selected by CHCs
<ul style="list-style-type: none"> ● MCH; home visits ● Attending births 		Fees (approx. \$2.00/delivery)	<ul style="list-style-type: none"> ● Female ● Illiterate ● Mostly over 40
<ul style="list-style-type: none"> ● MCH; environmental health; health education ● Curative care; communicable disease control 	Under discussion	Government salary may be supplemented by local development associations	<ul style="list-style-type: none"> ● All male ● Selected by local development associations or communities
<ul style="list-style-type: none"> ● Prenatal and postnatal care; education on nutrition, hygiene, breastfeeding, baby care, immunizations 			<ul style="list-style-type: none"> ● All female, most cannot read or write ● Selected by local development associations or communities

WHO/18581/P. Harrison]





project support

The analysis of AID-supported primary health care (PHC) projects confirms what knowledgeable students of development have long felt to be true—that management problems are the most pervasive and serious cause of the implementation difficulties encountered by projects. Although implementation is just beginning in many of the projects that were examined (see Table 5), a pattern is discernible: Governments have little difficulty completing the start-up activities of a project (e.g., constructing health facilities), but once health workers have been deployed and require support, serious problems arise in managing the project. Specifically, these are problems of administration, logistics, transportation, supervision, and collection and use of information.

It is noteworthy that staff from the projects with the longest operational experience are frequently the persons who stress most strongly the critical importance and the difficulty of establishing adequate support services.

- **Afghanistan/BHS.** Project advisers found that management problems were the most serious impediment to providing services effectively. Although progress was made in some areas during the six years the project operated, critical problems remained unsolved. Given the impressive efforts to improve Afghanistan's support structures, the main contractor providing technical support felt that a minimum of 5-10 years was necessary before an impact could begin to be made in these areas.

- **Bolivia/Montero.** In analyzing the project's five years of experience, the USAID/Bolivia health officer reported in 1980 that the project suffered because it moved too quickly into service delivery, without first building up sufficient support systems. Information, supplies, administration, maintenance, and supervision proved to be interdependent, and the weakness of any one had critical effects on frontline activities.

Despite the progress that some projects have made in different areas of management, none of the longer-running projects has satisfactorily solved its management problems. This chapter discusses these general support problems and then analyzes the more specific problems related to supervision, logistics, and information systems.

PROBLEMS AND CAUSES

Nearly all the 52 projects have been encumbered by serious problems in one or several areas of management, including:

- organization (modifying administrative structures to support program objectives, to reduce duplication of effort, and to avoid interagency conflicts);

- planning and budgeting;
- personnel (staffing patterns, job descriptions, assignments and transfers, staff training, salaries and benefits, personnel evaluation, and supervision);
- logistics for supervision and material support (transportation and procurement and distribution of drugs); and
- data collection for program planning, management, and evaluation.

Causal factors vary, depending on the economic, cultural, and political conditions in the countries, as well as on the size of the project and the managing agency. However, certain factors which contribute to the intractability of management and support problems are common to nearly all projects. These are the pace of health service expansion; the lack of funds; the shortage of trained manpower; institutions and procedures that are inefficient and resistant to change; and underdeveloped infrastructures.

Pace of Health Service Expansion

Many AID-supported PHC projects plan to make services accessible to the entire population of the project area within several years. To reach this goal, the projects have to build hundreds of health facilities, establish large numbers of community groups, and deploy thousands of new health workers (e.g., 4,700 new community health workers in Dominican Republic/Health Sector and approximately 5,000 village level workers in Honduras/Integrated). In many countries, even the management capability to sustain the relatively less complex health programs that precede PHC programs is weak. To increase substantially the requirements for support to many more dispersed locations is, simply, to overload an already faulty system.

Lack of Funds

Most governments' limited resources seriously hamper their ability to provide adequate support to large-scale PHC programs. This is especially true for the poorer countries. Of the 35 countries with projects, in approximately one-half, the governments spent less than \$4 per capita on health in 1976, and many spent no more than \$1 per capita.¹ In addition, although there is no consistent pattern among the countries studied, the health sector's share of the national budget has declined in some countries. In Senegal, for example, it declined from 9.2% in the 1969-1970 to 6% in the 1978-1979. In countries facing economic difficulties, governments have found it difficult to meet their

¹Ruth Leger Sivard, *World Military and Social Expenditures, World Priorities*, Leesburg, Virginia, 1980.

planned level of contributions to these projects' budgets.

The lack of funds is closely related to the question of spending priorities. Primary health care programs must compete for scarce government funds not only with other sectors, but also with hospitals and other traditional facilities in the health sector itself. Moreover, even though all countries budget funds for PHC, these funds usually succumb to the pressures to provide urgent secondary and tertiary care, so at the year's end the true PHC budget is much lower than that which was planned and published. An additional complicating factor is the political decision of many of the governments to offer free clinical services, drugs, and hospital care. Even for wealthy countries, this policy places a considerable strain on the health budget. In the face of such resource constraints, many governments have turned to planned local financing to make PHC programs financially viable. The strategy of local financing has been effective in covering drug costs, but not generally in deferring other major project costs. (See Chapter III.)

With limited national funding, these projects will be hampered severely by any increases in costs. The cost of fuel, which is extremely high at this time and continues to increase, has become a tremendous burden, particularly in poor African countries such as Kenya, Sudan, Central African Republic, and Mali. These countries have indicated that they cannot afford to maintain the vehicles and fuel which are required to meet the substantial demands of PHC programs for supplies and supervision.

Another problem related to funding is that governments generally must purchase from abroad such costly goods as drugs, equipment, and fuel. Shortages of foreign exchange in many countries exacerbate the difficulty of purchasing sufficient quantities of these goods. AID's requirement that projects purchase U.S. drugs, vehicles, and other goods may increase these costs.

Lack of Trained Manpower

A third factor contributing to problems of support is the widespread shortage of trained specialists to undertake different management functions. Some of the countries that were studied, especially the African nations, have virtually no trained statisticians, financial managers, or other needed experts. Often, as in Lesotho, Honduras, and Afghanistan, the few trained personnel available are not attracted to government service, and many leave government service for higher-paying jobs with private firms. In countries such as Jamaica, there has been a high out-migration of professional personnel.

Primary health care projects are complex undertakings, much more so than planners earlier realized. The complexity of a project has major implications for managerial capacity at both the national and the village levels. A national program, or a large-scale regional program, can easily overwhelm existing reservoirs of managerial talent within the operating ministry.

Institutional Resistance

Ministries of health (MOH) and related government entities are established institutions, with their own proce-

dures and practices rooted in the local culture and political environment. Institutions have evolved on the basis of political and technical decisions over the years; institutions as well as key officials often resist change. To bring about the kind of management improvement which will support PHC objectives, entire organizations (usually MOHs) may need to be reorganized, procedures may have to be changed, and personnel may have to be trained and re-assigned.

It is extremely difficult to implement primary health care in a nation's most peripheral areas in the absence of administrative reforms within the operating ministry (usually the MOH) which permit decentralization of authority to, at least, the regional or provincial level. Niger and Tanzania are among the few countries that underwent this process *before* attempting a national expansion of PHC services. Tunisia and Jamaica have been decentralizing their administrative systems for the past several years. In most cases, however, PHC is being implemented through a highly pyramidal structure, usually the same structure that was used when health services did not extend beyond the provincial level.

Established health officials and factions may feel threatened when PHC programs require such changes as the decentralization of the administrative structure, the reorganization of MOH divisions, the reallocation of divisional responsibilities and resources, the creation of new categories of personnel and new responsibilities for others, and the reassignment of staff. As the following examples show, such changes are difficult, and sometimes impossible, to make.

• **Dominican Republic/Health Sector.** The second evaluation, conducted in 1977, states, "It seems difficult to escape the conclusion that the idea of administrative reform has never had any appreciable support within SESPAS [the implementing agency]. It seems likely that many officials in SESPAS found the entire concept threatening." Three years after this statement appeared, the situation remained the same. As observed in the trip report (August 1980) of a project evaluator, the administrative reform "was neither desired nor understood by the Dominicans. It was regarded from first to last as a heavy-handed intervention forced on them from the outside."

• **Thailand/20 Province.** Thailand's National Institute for Development Administration recommended ways to solve the logistical problems of providing supplies. These were impossible to implement because radical bureaucratic changes were required.

The division of the MOH which manages the PHC program depends on cooperation from the supporting divisions (e.g., personnel and procurement) as well as other agencies, such as national planning boards, finance ministries, and ministries of public works (for construction and vehicle maintenance). The inflexibility of these MOH divisions, or of outside agencies, has created problems, three examples of which are cited below.

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● **Haiti/RHDS.** There are often delays of several months in obtaining routine release of funds for the project due to inefficient procedures in the Ministry of Finance. This impedes carrying out scheduled project activities such as training and supervision.

● **Bolivia/Montero.** Overcentralization, conflicts, and ineffectiveness in the Bolivian administrative system caused major delays. Delays in the approval of budgets and the disbursement of funds caused major difficulties. Salaries were delayed, sometimes for months; this bred discontent and attrition among the project's personnel. Funds for vehicle maintenance and other supplies and equipment often were unavailable when needed. Also, a number of newly-married female auxiliary nurses left the project because of the inability of the personnel system to approve transfers to the towns where the nurses' spouses lived.

● **Lesotho/RHD.** The government has been unable to retain trained management and support personnel because of general service conditions (e.g., salaries, postings, and lack of inducements).

Lack of Basic Infrastructures

The search for explanations of why support problems are so common leads inevitably to recognition of the fact that many countries lack the basic infrastructures for transportation, communication, and education that are needed to support PHC efforts. Confronted with external constraints over which it has little control, a project or ministry can do only so much to provide needed support services. The emphasis of the 52 projects on the creation of health services in sparsely populated, peripheral areas magnifies the importance of this factor. In many peripheral areas, there is not even representation from the MOH or the lowest administrative level of the central government.

Additional Factors

All the projects examined have similar management problems, but there appear to be differences in magnitude between the community-based approach and the facilities-extension approach. The community-based approach, which entails fielding and supporting hundreds, or even thousands, of CHWs and support personnel, requires tremendous managerial efforts. In addition, efforts to establish and maintain viable community participation create their own special support problems—training community members, keeping them motivated, and responding to requests for support of community initiatives. (See Chapter III.) In contrast, the facilities-extension approach is considered to be easier to manage (although it may be more expensive), because it uses no community-level workers and minimal community participation.

Generally, management problems have been easier to resolve in smaller projects than in large-scale efforts, because there are shorter distances to cover and fewer project personnel to support or supervise. Also, the smaller projects that were examined in this study tend to be managed more directly by private voluntary organizations (PVOs), universities, or consulting firms. At least in the short run,

these projects seem to have fewer support problems than those over which the government has prime operational control. The influence of a few well-trained and highly motivated individuals in managing a small project can be much greater than that in a nationwide program. However, even pilot programs (e.g., the Bara and Kaski projects in Nepal in the early 1970s) often develop support problems.

It also appears that projects in the Africa region are encountering greater administrative problems than in the other regions. Generally, government management capabilities are more developed in Latin America than in Africa, and they vary throughout Asia and the Near East. Management capabilities seem to vary according to a country's level of poverty (per capita income in the African countries that were studied averages \$273, compared to \$721 in the Latin American countries); general educational level (the average literacy rate in the African countries is 27 percent, compared to 58 percent in Latin American countries); and length of political independence (approximately 20 years for many African nations, but more than 150 years for the Latin American countries).¹

STRATEGIES BEING USED TO IMPROVE SUPPORT

When AID and host-government officials jointly plan a PHC project, they may have a choice of various institutions through which to administer the project. Their choice has important implications for the short- and long-term effectiveness of support services.

The most common arrangement is placement of the PHC program in the Ministry of Health bureaucracy, as in Mali/Yelimane-Koro, Nepal/Integrated, and Sudan/Northern. This arrangement is often problematic in the short run, because the project inherits the inefficiencies of the MOH. Nevertheless, it may be the most effective way to improve the project's chances for long-term institutionalization or replication in other parts of the country. A variation on this alternative is the creation of a new division within the MOH to administer the PHC project (e.g., Mauritania/Trarza and Central African Republic/Ouham).

A few projects are being administered outside the MOH, sometimes by institutions specially created for this purpose. The Korea/KHDI project created a separate entity, the Korean Health Development Institute. In Indonesia, the national family planning organization, BKKBN, is administering the PHC project. It appears that the BKKBN is evolving as the coordinator of village-level efforts. Its role complements the facility-based role of the MOH. Philippines/PUSH uses a unique institutional arrangement. This project is coordinated by the Regional Development Council, whose chairman is also the project director. The participating provincial and municipal governments coordinate implementation activities at the subregional level with the MOH, which assumes responsibility for all the technical aspects of the project.

¹Calculated from data in the *Demographic Yearbook 1976, United Nations, New York, 1977.*

Most PVO projects, although managed in collaboration with governments, are administered outside government agencies. (See Table 1 for a list of PVO-administered projects.) While this approach minimizes administrative and support problems, it can lead to long-term problems in institutionalizing the project.¹ (See Chapter VIII.)

The projects that were studied vary in the amount of attention they give to support functions, timing of support-strengthening efforts, and strategies to improve project support.

Attention Paid to Support Functions

In general, it appears that the African and Near East projects are giving more attention than the Latin American and Asian projects to the need to strengthen management capabilities. This finding is consistent with the generalization that institutional capabilities tend to be less developed in Africa than in other regions. Several projects have put a great deal of effort into improving support services, notably, Afghanistan/BHS, Lesotho/RHD, Swaziland/HMT, and Sudan/Northern. Other projects (e.g., Indonesia/VFP-MCW, Philippines/Bicol, Philippines/PUSH, Bolivia/Chiquitos, El Salvador/RHA, Nicaragua/PRACS, Panama/RHDS, and Tanzania/School Health) appear to have no specific component to strengthen the management infrastructure. In these cases, management support may come from other projects (e.g., Inter-American Development Bank and WHO/PAHO², which provide assistance in El Salvador). In other situations, as perhaps in Indonesia, it may not be necessary to strengthen management support. The lack of management-improvement activities can also mean that the problem is not a high priority for project planners.

In most projects, the extension of health services to unserved populations is given the highest priority; therefore, efforts to strengthen support services generally occur simultaneously with efforts to expand service delivery. A few countries (e.g., Swaziland/HMT, Lesotho/RHD, and Botswana/HSD), however, have chosen to first strengthen support services so that they will be prepared to expand service delivery at a later time.

Strategies to Improve Support Services

AID-assisted projects use two tactics to effect overall improvement of support services. They train host-country managers and other specialists, and they provide technical-advisory services. On the basis of the documents available, it is difficult to evaluate the impact of these methods. Several questions, however, have been raised about the

appropriateness of technical assistance and the effectiveness of training a few individuals without making simultaneous changes in organizational structures and procedures (both in the executing agency and in other ministries).

Projects and training components commonly encounter such problems as inappropriate training context, given conditions in the country; unqualified candidates who were selected for political reasons; and attrition of trained personnel soon after completion of training. In Egypt/SHDS, overseas training of personnel has posed problems. For example, there has been a lack of technically qualified applicants who speak English. Because of delays in the selection and approval of trainees, attrition has been a problem even among the qualified candidates. Although the training of third world personnel in the U.S. may result in training that is not fully relevant and in higher post-training attrition, several projects have sent trainees to the U.S.¹

A second approach to improving support capability is to provide short- and long-term technical advisers to a project. This approach has several advantages, if the advisers serve as facilitators and teachers, and not project managers. The most important advantage is that the consultants who work directly with the host-country organization can recommend and lobby for necessary procedural and organizational changes. Important questions, however, have been raised about the cultural relevance of the expertise that is being exported and about the style of management, both of which can be alien to existing systems of operation in most countries. The projects reviewed for this study seem to have done little to explore how more culturally appropriate methods can be designed to solve logistical, managerial, and organizational problems. (See Chapter VIII for additional information on the role of technical advisers.)

Despite the difficulty of improving supporting infrastructures, several projects with considerable implementation experience have demonstrated that progress can be made. The following examples are noteworthy.

- **Afghanistan/BHS.** After six years of technical assistance, the MOH, which initially had little awareness of many management areas, developed a capability to perform certain management functions, albeit rudimentarily. The attention given to management as a result of the project is evident in the increase in the number of management and training personnel in the Basic Health Services Division, from 1 in 1973 to 50 in 1979. Although the logistical improvements are noteworthy, manpower development and collection and use of management information remained problematical at the time the project was abruptly ended because of the political situation.

- **Nepal/Integrated.** More than 10 years of effort have resulted in modest gains. The MOH Planning Cell has designed a comprehensive survey of the effectiveness of all Ministry of Health programs. An indexed data bank for the

¹Even projects that work within the government framework go outside for specific resources. For example, the Mali/Yelimane-Koro project originally shared the MOH secretarial pool but it hired its own secretary because of delays in getting letters, memos, and materials to the field. Frustrated because they had to rely on the MOH vehicle allocation system, the Sudan/Northern technical advisers began hiring taxis.

²World Health Organization and Pan American Health Organization.

¹These projects are Nepal/FP-MCH, Afghanistan/BHS, Egypt/SHDS, Yemen/Tihama, Botswana/HSD, Lesotho/RHD, and Swaziland/HMT.

Planning Cell has been formed; a supervisor's manual for field inspections has been prepared (although supervision remains weak because of a lack of transportation and money for per diem); and a control and monitoring capability within the program has been created. Tremendous logistical problems have not, however, been resolved, and there are shortages of supplies. These problems greatly hurt the health workers' credibility.

An important step to facilitate good management is often the reorganization and decentralization of the MOH and related organizations. Several governments have made progress in this area, including:

- **Peru/Extension.** The national PHC scheme is being decentralized by the central MOH with the cooperation of the 10 health regions, each of which has developed its own regional operations plan for PHC.
- **Korea/KHDI.** With the AID health loan, three separate health planning and research entities were established: the National Health Council, the Korea Health Development Institute, and the National Health Secretariat.
- **Jamaica/Children.** A process of MOH decentralization has recently been put into operation to implement PHC.
- **Lesotho/RHD.** The MOH is being reorganized and regionalized into 17 health service areas.

Adequacy of Support-Strengthening Efforts

Despite the use of innovative tactics by some projects, the approaches to improving support capabilities are generally inadequate, given the magnitude of the problems they are designed to address. The emphasis has been primarily on training nationals and providing foreign advisers to overcome the shortcomings of personnel. Other areas identified as sources of problems are not being addressed adequately. These include the problem of inadequate financing to improve supervision and the procurement of drugs—two crucial aspects of PHC programs. Excessive demands on the support system continue to be made because the PHC system continues to expand too rapidly. Institutional inefficiencies also have not been adequately corrected.

A number of approaches are being used to reduce program costs: the provision of more selective PHC services, the use of low-cost support methods that do not rely on expensive fuel and sophisticated technology, and the reduction of costs through greater reliance on local remedies and healers. It is, however, still too early to judge whether these approaches represent an adequate solution to the problem of limited budgets. Local financing has made a contribution in some projects, but alone it cannot solve the problem.

It seems clear that many PHC projects continue to expand too fast for support services to keep up. This trend is difficult to alter, because both governments and AID need to show results from their efforts as rapidly as possible.

Several of the projects have assumed the difficult task of institutional reform and reorganization, but success has

been limited, and it is clear that many years are required to effect substantial change. Moreover, it is always problematical for outside donors to suggest and undertake such changes in government institutions.

SUPERVISION, LOGISTICS, AND INFORMATION SYSTEMS: PROBLEMS AND PROSPECTS

Supervision

The supervision of field personnel serves many critical purposes in these projects. It is a means to motivate and boost the morale of field workers; to provide continuing education and advice; to enhance field workers' credibility in the eyes of fellow villagers; to assess the quality and quantity of field workers' efforts; and to gather other information which can be fed back to program planners, administrators, and evaluators.

Infrequent and poor quality supervision appears to be a common problem in the PHC programs that were studied, and is particularly detrimental to their long-term effectiveness. (These issues are discussed in Chapter IV.) The few exceptions, such as the Philippines/PUSH project, where health workers feel they receive adequate supervision, do not obviate the general pattern.

1. Frequency of Supervision

Because supervision entails such expenses as vehicles, vehicle maintenance, fuel, salaries, and per diem (for supervisors, drivers, and mechanics), and because it can be suspended without causing temporary reductions in service delivery, it has become an expendable item in many programs.¹ Also, because of the lack of per diem and other incentives and the difficulties of travel, many supervisors go to the field infrequently, as the following examples illustrate.

- **Afghanistan/BHS.** The 1977 evaluation reported that in one year mobile teams made only 1.25 supervisory visits to only 60 percent of the basic health centers; no visits were made to the remaining 40 percent. Difficult conditions in the field and the lack of financial incentives were cited as the causes.

- **Sudan/Northern and Southern.** In these projects, costs and transportation problems have led to weak supervision of CHWs.

- **Senegal/Sine Saloum.** Supervision has been poor because planned supervisory teams were never formed, and chiefs of health posts, who were delegated supervisory duties, felt that it was beneath their social status to use the horses and buggies provided by the project for supervisory visits. AID's 1980 impact evaluation states that the issue of transportation for the supervisors is serious: "Chefs de Poste . . . will resist the loss of status and convenience involved in going back to horse and buggy technology. Yet . . . the

¹In-service education, another item crucial to CHWs' effectiveness, also has been cut back by many governments when funds have been depleted.

Senegalese Government cannot and will not provide financially or administratively for effective vehicle maintenance or gasoline supply."

2. Quality of Supervision

The social and educational gap that separates supervisors from the supervised has caused problems in many projects. The social distance can be either too small or too great, as can educational differences, and even differences in skills. A lack of supervisory training can lead to authoritarianism; in such instances, supervisors see their role as policing others (e.g., "Is the health worker keeping proper records?"). Even if budgetary constraints did not exist and field visits were being made, supervisors would need training in human relations and other specialized skills to fulfill the objectives of supervision.

A number of projects have tried different supervisory arrangements in an effort to find a workable approach. Among them are:

- **Dominican Republic/Health Sector.** Auxiliary nurses, trained in curative medicine and stationed in urban areas, supervised the village promoters. Their inappropriate background soon became evident. They are being replaced by health educators, many more of whom are being selected from rural areas. The new supervisors are reported to be working well.
- **Bolivia/Montero.** The concept of using one level of auxiliary nurse (Auxiliary II) to supervise both promoters and a lower level of auxiliary nurse (Auxiliary I) did not work, because the social distance between the two groups was too small to permit authority. The Auxiliaries II eventually became intermediaries between the Auxiliaries I and higher levels. It was found that use of supervisors of the opposite sex did not work well.
- **El Salvador/RHA.** The malaria program evaluators who initially supervised rural health aides are being replaced by specially trained supervisors. The malaria personnel were too busy with their malaria work, and they were not technically qualified to supervise the aides. Moreover, there were problems with the style of supervision, because discipline in the malaria program is military-like, and personnel tended to emphasize compliance with procedures more than counseling and assistance.
- **Panama/RHDS.** The project has been using physicians to supervise health aides, because in a two-year pilot project physicians proved to be more effective as supervisors than did nurses or auxiliary nurses.
- **Botswana/HSD, Pakistan/BHS, Lesotho/RHD, Thailand/Lampang, and Guyana/RHS.** These projects are creating new categories of mid-level workers (generically called MEDEX) to supervise CHWs and to provide curative services and train CHWs. According to a 1981 evaluation, it is too early to make firm judgments about the overall effectiveness of the MEDEX concept.

3. Strategies for Improving Supervision

Many projects have found it difficult to maintain minimal

supervision of frontline workers, for only about one-half of the projects does AID provide support specifically to improve supervision. Among the 52 projects, however, there are indications that substantial and innovative efforts are being made to improve both the frequency and quality of supervision. The different strategies being used by the projects include:

Long-Term Field Visits

Supervision is reportedly effective in the Tanzania/Hanang project. Every two months, a project supervisor makes week-long visits to support the VHWs' health and community work. However, it is feared that site visits cannot be maintained at current levels once external funding ends, because there is a shortage of personnel and fuel.

Meetings of CHWs

In Honduras/Integrated, local health workers meet periodically with supervisors at a district health center. This technique increases the frequency of contact and has the additional benefit of regularly assembling CHWs to exchange information and ideas. It is, however, an expensive proposition for volunteer health workers who receive no per diem. Its additional disadvantage is that the supervisors do not see the CHWs in their own villages, and thus cannot observe them directly and talk to their fellow workers, village leaders, and the public in general.

Supervision by Health Committee

Several projects, including the Dominican Republic/Health Sector, Guatemala/SINAPS, Peru/ORDE-ICA, Kenya/Kibwezi, Senegal/Sine Saloum, and Afghanistan/BHS, have given or have proposed to give a supervisory role to villagers or village health committees. The feasibility of this concept has yet to be demonstrated by these projects.

Radio

Another strategy is the use of radio for supervision. The potential advantage of this tactic is that it may supplement personal contact in areas where health workers are extremely isolated. Nicaragua/East Coast, Lesotho/RHD, Guyana/RHS, and Panama/RHDS use two-way radios to supervise and educate isolated health workers. Senegal/Sine Saloum has used regular commercial radio to inform and motivate field health workers, as well as the public. The Honduras/Integrated project has similar plans.

Logistics

Logistics is essential to transport people involved in planning, supervision, direct service provision, and evaluation, as well as to procure, store, and distribute drugs, supplies, and equipment. Adequate logistical support requires answering such questions as what drugs and equipment are appropriately used by which workers at which service levels; what quantities must be ordered; how and where supplies can be stored; how supplies are distributed; how and when items must be reordered; and what can be done to prevent expired drugs and ruined vaccines. Logistical management requires a number of complex skills, and in many

countries professionals trained in such areas are scarce.

1. Transportation

The transportation of people and supplies is a challenge in almost all the programs studied. The constraints are enormous. Expensive, scarce vehicles and fuel are required. There is a high percentage of "down" vehicles because maintenance and repair systems are poor and there are few well-trained maintenance and repair personnel. Spare parts are few. Roads are impassable during the rainy season, and enormous distances must be covered over poor roads. Villages in many countries are virtually impossible to reach by motorized vehicle; some locations in the project areas can only be reached by walking or riding a camel or mule for several days. The following examples illustrate the range of transportation problems.

- **Egypt/SHDS.** Vehicle maintenance has been difficult because the program has inherited many different models.
- **Thailand/20 Province.** The 1980 evaluators of the project reported that at every site they visited, the staff expressed concern about the shortage of vehicles and the inflated cost of gasoline, which was not anticipated in the project's budget. These were considered to be critical problems because extensive travel is required for service delivery, health education activities, and supervision.
- **Lesotho/RHD.** AID is supporting a redesign of the logistics system for this project, a difficult task because of the problem of maintaining a great variety of different vehicles (provided by various donors). Transportation difficulties have hampered drug distribution.

A number of projects have components that specifically address transportation problems. Mechanics are being trained and garage facilities are being improved in the Niger/Diffa and RHI, Sudan/Northern, and Central African Republic/Ouham projects.¹ A few projects are experimenting with forms of transportation that are not highly fuel-dependent. These are:

- **Senegal/Sine Saloum.** The redesigned project will replace horses and buggies with mopeds. Mopeds are also being used in other projects (e.g., Niger/RHI).
- **Peru/ORDE-ICA.** As an experiment, the project purchased 20 mules for sanitarians who supervise health promoters. The experiment failed because the cost to maintain the mules was extremely high in the Sierra, where there is little grass, and several mules died.

2. Drug Supply

Difficulty in maintaining an adequate supply of drugs and other supplies at the village level has had severe consequences for most of the projects included in this study. Problems in procurement, as well as inventory control and distribution, are common, as the following examples show.

- **Egypt/SHDS.** Many commodities ordered from abroad

have either been unsuitable, because of insufficiently detailed specifications, or have been greatly delayed or lost. Even local procurement has been slow and difficult.

- **Senegal/Sine Saloum.** The initial drug supplies came from the U.S. Some arrived almost at the time of expiration, and all had English labels, which made them more difficult to use.
- **Niger/RHI.** Although the supply of medicines to the dispensary level seems to be fairly adequate, resupply of medicines to CHWs is not adequate. The most frequent method for resupplying *secouristes* is through supervisory visits. These visits are supposed to occur monthly or bi-monthly, but in practice range from one a month to one per year. On random visits, staff found that few village-level workers had a full complement of drugs.

The critical importance of sufficient drug supplies for the credibility of CHWs and service utilization has been discussed earlier. (See Chapters III and IV.) The following cases typify the consequences of both adequate and inadequate supplies of drugs.

- **Nepal/Integrated.** In Nepal, the government normally can afford to purchase only a three-month supply of drugs for its field workers each year. Where drug supplies are insufficient, villagers lose faith in the health workers and stop seeking their services. In 1980, after years of program activity, the chronic shortage of medicines continued to plague Nepal's health delivery system.
- **Afghanistan/BHS.** The Parwan-Kapisa pilot project showed that clinic use tripled when an adequate supply of drugs was made available.
- **Honduras/Integrated.** The ineffective drug logistics system leaves the CHWs without drugs for long periods of time. The results are a dramatic decline in service and a high rate of attrition among CHWs.
- **Niger/Diffa and RHI.** These projects have faced tremendous problems because of the lack of suitable transport (other than camels and horses) for reaching isolated villages. They also have encountered difficulties in maintaining vehicles.
- **Sudan/Northern.** This project has encountered severe vehicle problems. When vehicles finally arrived in-country after a long delay, they were not properly maintained, and 25 percent were out of commission after only three months of operation.
- **Sudan/Southern.** Fuel shortages, partly a consequence of political instability in Iran and political upheaval in Uganda, through which oil supplies passed, greatly interfered with the project's progress.
- **Zaire/HSD.** The Kongolo pilot project never got under way because of transportation problems. The tremendous difficulty of establishing and maintaining a program 1,100 miles from the capital played no small part in impeding implementation.
- **Kenya/Kitui.** As in all programs that use mobile units, this project is stymied by impassable roads during heavy rains.

¹In the latter, this occurred before the project was terminated for political reasons.

● **Bolivia/Montero.** In the judgment of an AID health officer, "The key problem related to promoters' failure was their premature training and assignment to villages when they had no support, i.e., drugs, and supervision. They lost credibility."

Although most projects encountered severe problems in managing and distributing drugs and other supplies, several projects are applying innovative concepts to improve logistics. Two notable efforts are found in Peru/Extension and Afghanistan/BHS.

● **Peru/Extension.** The project is developing a drug procurement and distribution system that relies on regional warehouses and management.

● **Afghanistan/BHS.** This project reduced the number of different drugs used, introduced generic drugs, and established new procedures for the central warehouse. Between 1973 and 1977, the time required to distribute drugs to the most peripheral health facilities was reduced by 50%.

Some projects are using private sector or non-MOH resources and experience to correct logistical problems. Some representative samples are:

● **Thailand/Lampang.** Initial drug shortages in villages led to serious declines in use rates. Later, commercial drug outlets were used at the subdistrict level to handle local distribution, thus streamlining the original system.

● **Nepal/FP-MCH.** A commercial contraceptive system has been successfully supplying pills and condoms and publicizing and desensitizing the family planning issue. This approach to distributing contraceptives has also worked well in many other family planning programs.

● **Guatemala/PRINAPS.** This project uses local government pharmacies, supplied from the national drug warehouse, that sell drugs at low cost.

● **Mali/Yelimane-Koro.** A quasi-governmental organization, the *Pharmacie Populaire*, sells drugs at retail price and has a legal monopoly. To enable the project to provide drugs legally, village pharmacies have been set up as cooperatives and use the price structure of the *Pharmacie Populaire*. Tax-free U.S. drugs are used, and communities can buy the drugs at a 15-percent discount. Money from drug sales is used to restock supplies. The profits go into a MOH-AID revolving fund.

● **Mauritania/Trarza.** Commercial agents licensed by PHARMARIM, the government pharmaceutical distributor, are responsible for maintaining sufficient stocks and keeping records of sales.

3. Information Systems

The 52 PHC projects rely on the availability of adequate data for project evaluations, for decision-making (by managers and policymakers), and for motivation of project staff. Although provision for an information system is made in almost every project plan, during implementation the system rarely functions as intended and rarely provides the desired data. The information system either breaks down or produces information that is never used. Often, infor-

mation is not used because it is more detailed than is necessary, produced too late to be of value, or inappropriate given the decisions that must be made. Even useful data may be ignored by managers who trust only personal experience or who make decisions for political reasons. (Chapter VII discusses information collected for project evaluation.)

The following are examples of some of the problems which projects encounter in trying to establish effective information systems.

● **Jamaica/Children:** A 1981 analysis of the national PHC program indicated that although a large number of records are filled out at the district level, most are not standardized, and their utilization for programming, supervision, monitoring, and evaluation at the district level is "non-existent." The study concluded that health staff do not see the value of health information for their work. They act "mostly as producers and not users of information." (A 1982 evaluation, however, reported that a new user-oriented system was being developed.)

● **Afghanistan/BHS.** Two years after the project began, the Ministry of Public Health was operating in a relative information vacuum. Health data that were collected from surveys or from health centers and hospitals were rarely used by Ministry officials to make technical decisions. Political factors and personal connections remained the more important concerns. The final report by the long-term advisory organization notes that many more data were collected than were ever used. Although the project's technical advisers placed great emphasis on the development and simplification of routine health services reporting systems and annual work-planning procedures, none of this "took." Ministry managers who were not accustomed to relying on such information continued to make decisions on impressionistic and interpersonal grounds.

● **Thailand/Lampang.** A case study of the project confirms the difficulty of establishing an effective information system. Even after the project's information system was generating useful data, decision-makers continued to rely on intuition and personal experience.

● **Honduras/Integrated.** Information collected locally was forwarded to the central level for tabulation and analysis. By the time these procedures were completed, the information was out of date.

● **Philippines/PUSH.** The 1980 evaluation of the project indicates that data collected by *barangay* health workers are neither analyzed nor used to adjust priorities.

Although few projects have been instrumental in developing appropriate and effective information systems, progress is being made in some countries.

● **Lesotho/RHD.** This project is attempting to reorganize the national health data system, including the design of new forms and the establishment of a statistics subunit in the MOH. Swaziland/HMT, Sudan/Northern, and the Nepal projects have taken similar steps.

● **Nepal/Integrated.** The 1980 evaluation indicated that a control and monitoring capability has been fairly well es-

tablished. The number of required forms has been greatly reduced, although new ones are not universally used.

- **Bolivia/Montero.** A study showed that promoters and auxiliaries were spending from one-third to two-thirds of

their time filling out forms. The number of required forms was reduced from 12 to 3. The project continued to try to better match the information gathered and tabulated with the information needed to make management decisions.

Travelling by motorbike, this health worker in Costa Rica makes 200 home visits each month. (WHO/18618/P. Harrison)



In Afghanistan villagers participate in their own health improvement by making cement slabs for latrines. (UNICEF/J. Ling)



program costs

Although the stated intention of all the programs is to provide low-cost, affordable health care, this study has yielded little evidence that would indicate whether such care can or cannot be delivered. Cost estimates are made during the planning stage, but costs of programs (or of program components) are not calculated regularly as a part of program evaluation.

Recurrent Costs

The limited data on financing indicate that annual per capita recurrent costs range from U.S.\$0.50 for Afghanistan/BHS to U.S.\$15.40 for Bolivia/Montero. These data are comparable; they were developed as part of the same study. Information on the recurrent costs of three programs is summarized in the following table.

RECURRENT PROGRAM COSTS

Program	Annual Per Capita Costs Of Program ¹	Recurrent Cost of Program as Percent of GNP ² (per capita)	Total Gov't Health Expenditure ² (per capita)
Afghanistan/BHS	\$ 0.50	0.3%	\$ 1.00
Dominican Republic/ Health Sector	\$ 2.70	0.4%	\$11.00
Bolivia/Montero	\$15.40	3.9%	\$ 7.00

¹Grosse, DeVries, et al., *A Study of Costs and Coverage of Low Cost "Integrated" Health Services*, APHA, Washington, D.C., 1979.

²Ruth Legar Sivard, *World Military and Social Expenditures*, World Priorities, Leesburg, Virginia, 1980.

Other data are available on recurrent costs elsewhere. They are, however, not comparable, because they include calculations for both per capita and per service contact, and they do not use similar assumptions about costing. The data that were identified are for the following projects:¹

- **Dominican Republic/Health Sector.** Per capita yearly recurrent costs for the primary health care program ranged between U.S.\$2.54 and U.S.\$3.74 for the period 1976-1979 (estimated to be U.S.\$2.70 per capita annually).

- **Korea/KHDI.** The average cost per service contact in the project area was U.S.\$2.00, compared to U.S.\$7.00 in control areas. (Detailed cost information exists for this project.)

Program Cost Issues

The information base does not support a comparison of costs for PHC programs and alternative health delivery systems. However, a number of cost-related issues have

emerged which can be discussed in general terms. These concern the underestimation of costs, local financing, and the equitable distribution of costs.

1. Cost Estimates

There are indications that the costs of PHC projects have been underestimated. Both AID and ministries of health need more field experience in implementing PHC projects to better understand how much funding is required to develop and sustain such critical program components as community participation, supervision (e.g., per diem, salaries, and transportation), and drug supply. Escalating fuel costs, for example, have seriously affected PHC programs. The fact that fuel must be purchased with foreign exchange compounds this problem. The inhibiting effect of increased fuel costs is mentioned in many project evaluations, including those for Senegal/Sine Saloum, Kenya/Kibwezi, Sudan/Northern and Southern, Niger/RHI and Diffa, Mali/Yelimane-Koro, and Central African Republic/Ouham.

It should be emphasized that the issue is not inadequately-funded projects, but inexperience in identifying the activities—and resultant costs—that must be incurred in these new programs. The problem will not necessarily be solved simply by increasing the funding level of the projects. Cost alone is but one of a number of varied problems peculiar to program support. (See Chapter V.)

2. Local Financing

Efforts to keep costs of PHC programs low by transferring responsibility for certain recurrent costs to the community have been partially successful. A number of projects have been successful in getting communities to finance drugs, but of the 28 projects that use community financing to compensate community health workers (CHWs), none has a satisfactory method for obtaining local support.¹

3. Equity of Cost Distribution

In many countries, persons in rural areas are being asked to pay for PHC, while those in urban areas have access to free care.² In most of these rural programs, villagers must pay for drugs, and in approximately one-half of the projects, communities are being asked to finance their CHWs. This inequity is an issue which most of the governments have not addressed. In many of the countries, the government

¹The financing of CHWs is discussed in Chapter III. Ways to increase communities' valuation of CHWs' services are discussed in Chapter IV.

²Free, in the sense that no direct fees are involved, although taxation generally supports at least part of the costs of health services.

¹Detailed cost information on Thailand/Lampang will become available in 1982.

policy is to provide free health care, which often includes hospitalization and drugs, as well as other interventions. It is important to focus on this issue because few governments can afford to provide free care for all, and, consequently, most restrict services to limited segments of the population, or provide inadequate care for most citizens.

Long-Term Financial Viability

During planning, AID programmers commonly experience difficulties in acquiring an adequate and reliable data base for projecting the operating costs of projects. Information about a country's pattern of health care delivery and trends in spending, as well as projections of future resource availability, are often limited; and because they may be maintained by different government agencies, the data often cannot be aggregated in a form useful for regional or rural projects. In the countries studied, data on costs and expenditures for various components of the health sector (public and private) generally are not available, or, if they are available, they are not used to develop projections. This lack of data on health expenditures for most of the 52 projects has limited AID's ability to analyze the countries' capacity to absorb the recurrent costs of projects after AID funding has been terminated.

Because initial financial assumptions about projects are often overly optimistic and costs are underestimated, the long-term financial viability of programs is not ensured. Also, the economies of many of the countries studied have been crippled by the current world economic crisis. Rapidly rising costs of providing health services are making it increasingly difficult for governments to finance the expansion of their health delivery systems. Assuming no changes in national health priorities or in the percentage of the national budgets allocated for primary health care, it appears that many countries will not be able to afford to continue programs once external support ends. The following examples illustrate this point.

- **Sudan/Northern and Southern.** It is uncertain whether the Government of Sudan (GOS) can assume recurrent program costs, because the GOS is facing a severe balance-of-payments crisis. Debt-servicing obligations have severely reduced the foreign exchange available to buy drugs and fuel.
 - **Zaire/HSD.** The sharp decline in Zaire's economic position since 1974 has resulted in the elimination of health as a national priority and has led to heavy cuts in the health budget.
 - **Yemen/Tihama.** At this time, the government's resources are extremely limited, because of minimal taxation, despite sizable remittances of foreign currency from Yemenis working abroad. Inflation is rampant. Nonetheless, at least for the time being, the government insists on offering free services.
- The projects which depend on salaried CHWs face the most immediate problems. Support for CHWs can be a major expense, especially if the government is providing salaries, a career structure, and other benefits. In small countries, such as the Dominican Republic (where 4,700 CHWs are paid \$360 per year), salaries may amount to \$1.7 million a year; in El Salvador, salaries for CHWs now cost the government more than \$1 million a year. The Project Paper (plan) for Pakistan/BHS estimated that if CHWs were salaried, they would cost the government nearly \$10 million per year by the eighth year of the project. In larger countries, where considerably more CHWs are needed to cover rural areas, the recurrent costs for this program item are substantially higher. Virtually every country that uses salaried CHWs has formally expressed doubts about its ability to continue doing so. The Philippines, Sudan, El Salvador, Yemen, Haiti, and Guyana are among these countries. This concern is illustrated in the following examples.
- **Philippines/Bicol.** The government reportedly believes that the project cannot be replicated countrywide, because of the high cost of using paid community health workers. AID and the government are investigating possible solutions.
 - **Haiti/RHDS.** AID plans to pay the salaries of 550 auxiliary nurses and 1,500 health agents, although there is little likelihood that the government will assume these costs.
 - **Guyana/RHS.** In recent years the government has faced an economic crisis which has seriously hampered its ability to pay CHWs and keep them supplied with basic drugs.
- Several countries have adapted their programs to make them more financially viable. The following are examples.
- **Senegal/Sine Saloum.** After the 1980 evaluation concluded that the government could not sustain the drugs and other costs associated with the PHC project, the project was redesigned to limit government costs. The number of health posts was reduced, the communities were given increased financial responsibility, and one of the three categories of community-level health workers (the hygienist) was eliminated.
 - **El Salvador/RHA and Panama/RHDS.** Both governments, seeing the impossibility of paying salaries for an ever-growing cadre of auxiliaries, have slowed down program expansion.

program evaluation and general progress

The documents reviewed contain few data that indicate the impact that the primary health care projects have had on health status, and only limited information on other measures of progress. There are several explanations. Most of the projects were initiated after 1975; thus when the project summaries were prepared in 1980-1981, approximately half of the projects had begun to deliver services only in the past two years—not enough time for changes in health status to be reported. Also, because only secondary sources were used to prepare these summaries, there was no opportunity to take advantage of untabulated or unpublished data which may exist only in the field.

Because projects typically face difficulties in obtaining reliable and statistically significant information from evaluations and because the data are often inconclusive, it is unclear what kinds of impact data can be expected in the future. But several kinds of data that are being collected at this time are potentially useful in assessing the effectiveness of projects and approaches to service delivery. These are outcome data, which indicate changes in health status (among different age groups and sexes in the community); process data, which indicate changes in use of services; data on the outputs of projects, which indicate what project activities have been completed; and cost data. (See Chapter VI.)

Data on changes in health status are the best indicators of impact. However, such data are expensive, difficult, and time-consuming to produce, and often yield ambiguous results. Evaluators of health programs have found it difficult to devise short-term measures sensitive enough to detect change in the health status of the population, and have also found that because of exogenous factors, measured changes often cannot be definitively attributed to the project. Because of these problems, changes in service use often serve as an indirect or intermediate measure of impact. These process data do not indicate changes in health status, but rather enable projects to gauge their potential health impact. The most indirect measure of project impact now being used is that obtained from statistics on changes in the number of facilities, personnel, and other outputs ascribed to the project. These data, although easy to collect (and essential for AID project monitoring and host-country project management) are not reliable predictors of impact.

In addition to collecting data to assess the overall impact of primary health care projects, it would be helpful to know how each of the various PHC components has affected the status of health. For example, has the development of community-based health services brought about change? It would also be of interest to determine the impact of other com-

ponents, such as the strengthening of existing health delivery services and the provision of a sanitary infrastructure and potable water.

Because these PHC activities take place simultaneously, and in some programs at the same time as certain vertical programs (e.g., malaria and family planning programs), it is rarely possible to identify the effects of introducing peripheral, community-based services—the newest and most distinctive aspect of PHC programs. For example, data may indicate that the percentage of children vaccinated has increased sharply. But is this increase attributable to the use of the community-based component, or is it the result of a well-executed, standard vaccination campaign? If improved sanitation and well construction is undertaken and achieved, does the achievement reflect on the broad PHC approach, or does it represent simply the success of one activity which is but a part of a broader strategy? These kinds of questions are difficult to answer, all the more so because few of the projects that were reviewed appear to have been designed to provide feedback useful in evaluating each PHC component separately.

PLANNED METHODS OF EVALUATION

All the projects have evaluation components. Typically, three methods of data collection are planned. Research studies may be conducted to measure outcome; routine program statistics may be monitored continuously to obtain process data; and periodic evaluations may be initiated by AID to assess progress in carrying out planned project activities and to verify the status of a project's outputs. Although the latter kind of study is relatively easy to carry out, and has been completed for most of the projects, few studies of outcome have been completed and few process data are available. The experience of projects with each of these three kinds of evaluations is discussed below.

Outcome Evaluations

Nearly all the projects plan to evaluate outcome by measuring changes in health status.¹ This is being done in several ways. One frequently used approach is to compare baseline, or benchmark, data with the results of a survey taken at the end of a completed project. Some projects also plan interim surveys. For example, interim studies are planned to occur yearly in Kenya/Kitui, Guyana/RHS, and Jamaica/Children. In Yemen/Tihama, such studies are planned for the first, third, and sixth years of the project. A second method is to monitor changes through the in-

¹No information was obtained on the evaluation plans of eight of the projects.

formation system. Ten of the projects, including Tanzania/Hanang and Indonesia/VFP-MCW, have not planned special "before-and-after" studies. Instead, these projects are evaluating changes in health status by monitoring information that is collected routinely for the programs' management information systems. No special surveys are used in this approach. In other countries, longitudinal studies are being conducted. Niger and Nepal are using (or are planning to use) highly focused studies of one indicator to gauge outcome. Nepal/Integrated is undertaking disease-specific longitudinal surveys of general health status, for reasons of cost and manageability. The Niger/IRH project plans to conduct longitudinal studies in a few villages where CHWs are used and in a control group where there are no CHWs.

In the PHC projects reviewed, data used to evaluate changes in health status may include mortality rates, incidence of low birth weight, incidence of communicable disease, life expectancy, and nutritional status. Other indicators, such as productivity of workers, are used also, though less frequently.

As part of ongoing government health delivery systems, most of the projects are not research-oriented. Research is expensive and not always politically feasible, especially if it requires a control area where services cannot be introduced at the same time as in other communities.

Only six of the projects, three of which are described below, are being carried out as carefully controlled research experiments, with control groups which subsequently will be phased into the programs, and with special resources for evaluation. Only the few projects with control groups have tried to differentiate the effects of adding community-based health services at the periphery from the effects of strengthening traditional service delivery programs.

- **Guatemala/SINAPS.** The project includes a control group that receives conventional services from the Ministry of Health. The baseline and follow-up surveys will include a random sample of 2,000 households.
- **Thailand/Lampang.** The project is a quasi-experimental, pretest/posttest, with two control areas, both of which have been phased in gradually. There is a special evaluation and research division to monitor progress and measure the project's impact on service delivery and health status. Sample surveys include 20% of households.
- **Honduras/Integrated.** Plans are to compare infant and child mortality rates in areas with the PHC program to those in control areas with traditional MOH services.

Other projects that are using a control locality are Korea/KHDI, Panama/RHDS, and Egypt/SHDS.

Measuring outcome through changes in health status has been a problem for most of the 52 PHC projects, as it has been for other projects that have tried to measure the impact of health interventions. Because most of the projects stress service delivery, rather than research with rigorous controls, it is particularly difficult to separate the changes in health that stem directly from program activities from changes brought about by external or exogenous

factors. Even well-designed and carefully-executed research projects (e.g., Thailand/Lampang) often produce ambiguous results.

Governments implementing PHC programs tend to view research as non-productive and a poor use of funds. As a result, many evaluation components are initiated but never completed; others are executed late; and still others are never initiated. These problems appear to be particularly acute when the government is responsible for funding research, or when research requires substantial contributions of scarce personnel, as the following examples show.

- **Niger/RHI.** Planned baseline studies have not been initiated, although the project began more than two years ago. Because the studies are not funded by the project, the 1981 evaluation indicated that there is little chance that they will ever be done.
- **Dominican Republic/Health Sector.** The government failed to respond to AID's requests for counterpart contributions to carry out the nutrition research elements of the project.
- **Pakistan/BHS.** Baseline surveys, which were the responsibility of the government, were not carried out until three and one-half years after the project began, and the study then was abbreviated; it was considered of limited usefulness by the 1981 evaluators.

Several projects have had to drop plans to conduct follow-up field surveys, either because baseline data were of poor quality, data were inappropriate, or the scope of research was unrealistic. Obtaining reliable survey data in rural areas is difficult under the best of circumstances, and a number of projects have had problems using data, both because of their quality and their complexity. The validity of the baseline study conducted in Pakistan/BHS, for example, is thought to be questionable. The study made in Sudan/Southern is considered to be an inadequate benchmark for measuring impact. In the Dominican Republic/Health Sector project, unplanned sample surveys had to be conducted because the original baseline data were unreliable, and in Mali/Yelimane-Koro, because of problems of methodology and execution, the epidemiological baseline studies cannot be used.

The government of Thailand decided not to carry out a follow-up survey in the 20 Province project, because the baseline study was too complicated and costly. In the Kenya/Kitui project, the baseline survey was followed up only once, instead of yearly, because the evaluators felt that the survey was needlessly detailed. The 1981 evaluation of the Peru/ORDF ICA project noted that the baseline study was too complex, and although suitable for academic purposes, was not appropriate for the project.

Process Evaluations

It is planned that the projects' information systems produce routine program statistics which can be used in project evaluations or as feedback for management decisions. Among the evaluation indicators commonly used in the 52 projects are data on changes in the use of health facil-

ities, the provision of services (contraceptives, prenatal controls, etc.) and changes in the number of people with access to health services.

Many of the projects have had difficulty establishing functioning data collection and analysis systems. The major problem is that many of the systems are too complicated. The information that is collected often includes more than essential data, and this great volume of statistics slows down the entire system. The problem of motivating health workers to collect and report data also seems to persist. Even when data are obtained, their reliability and validity may be low. Illustrative examples of these problems are:

- **Guatemala/SINAPS.** The volume of data is overwhelming. The proposed data system requires the health promoter to complete more than 2,200 blanks per month and the supervisor to summarize 20 reports. This is a total of 45,000 items.
- **Thailand/20 Province.** The system is greatly in need of further simplification and strengthening. Although the reporting and processing system should provide evaluation data, such information is not available at this time.
- **Tanzania/Hanang.** The project's elaborate health information system works reasonably well under the present guidance of technical advisers, but it is too sophisticated for its users, and the data must be processed in the U.S. It is doubtful that all data collection activities will continue when the project terminates.

Output Evaluations

Evaluation data on project outputs are commonly available from periodic evaluations performed by AID. These are known as Project Evaluation Summaries (PES's), and they include statistics on the number of facilities, personnel, equipment, and other outputs ascribed to the project. Although useful for monitoring the progress of a project, the PES's are not designed to indicate the effectiveness or the quality of outputs. They tend to be task-oriented, and generally they do not provide the kind of information that is helpful in designing future programs.

RESULTS

The evaluation information obtained on the projects consists primarily of data on project outputs. These data are complete and generally presented in a usable form. The reporting of other kinds of data in project documents, however, may be imprecise, indicating neither actual figures, parameters, nor periods of time over which changes occurred. The base used for comparison is not always mentioned. The information may lack a context. Changes tend to be reported, but information on historical trends in non-project areas, or other information about exogenous factors that would be helpful in assessing the significance of the reported changes, tends to be lacking. Few data provide a perspective on the effectiveness of the PHC approach or its characteristic elements, community participation and CHWs.

The available data on the impact of 52 projects reviewed for this analysis are summarized below.

Data on Outcome

There were only five evaluations of health status located in the project documents reviewed. The examples are not comparable, because they deal with different measures of outcome.

- **Egypt/SHDS.** A 1980 applied research study, including 29,000 children under 5, showed that in villages where Oralyte was distributed to homes, infant mortality was reduced by 40%. Where mothers administered a rehydration fluid made from household ingredients mortality was reduced equally. In the groups where Oralyte was made available through pharmacists, the infant mortality decreased by 15%. By contrast, the control groups reduced deaths by 12%.
- **Panama/RHDS.** A survey conducted by the MOH in 1976 demonstrated that villages which built safe water supply and excreta disposal systems registered marked decreases in the incidence of diarrhea (67% reduction), parasites (65% decrease), and typhoid (64% decrease).
- **Kenya/Kitui.** Reductions in infant mortality are reported in the 1980 project review, although supportive data are not provided.
- **Nepal/Integrated.** The 1980 AID evaluation reported that the health status of the population has not improved significantly.
- **Thailand/Lampang.** The final project report (1981) indicates that between 1974 and 1979, little change was observed in the health or nutritional status of the target populations or of the general population, and that the slight effects observed cannot be clearly attributable to project interventions. Fertility rates decreased substantially in all project areas. However, the report states that these changes appear to represent general trends, similar to those in other areas of northern Thailand, and cannot be attributed to project interventions.

Process Data

Information on changes in patient visits at health facilities was obtained for seven of the projects. The information from Senegal/Sine Saloum, Niger/RHI, and El Salvador/RHA indicates clearly positive results which seem to be attributable to the use of CHWs that is characteristic of the PHC approach. The other data are not detailed enough to show that reported changes are either positive or negative.¹ An increase in the number of patient visits to health centers could indicate several changes: an increase in the demand for services, because of better facilities and staff; an increase in the number of referrals from CHWs; underutilization of CHWs (bypassing them for higher-level facilities); or changes in external conditions (e.g., increases in population, improvement in the economy, or changes in perceived morbidity). The data are also limited in that they do not indicate quality of care being provided (i.e.,

¹Disaggregated data, indicating numbers as well as patterns in the distribution of visits, are required to determine whether or not the changes are positive.

quality of diagnosis and treatment and appropriateness of drugs prescribed).

- **Thailand/Lampang.** Between 1974 and 1979, there were increases in the use of all health services, and a clear shift toward utilization of rural health facilities and village-based providers. Use of child health services increased by 25% (compared to -3% to +8% in the control areas), and women's health services increased 9%-15% (2%-14% in the control areas). The proportion of the population using illness-care services increased from 20% to 30% (there were no increases in control areas).
- **Bolivia/Montero.** This project reported that patient visits were four times as great in the project areas as in other areas.
- **Senegal/Sine Saloum.** Attendance at rural health facilities was reported to have decreased because many villagers were being treated by CHWs, which relieved the facilities of the easier cases.
- **El Salvador/RHA.** The 1979 evaluation indicated that because of the program, there has been greater use of rural facilities in areas where rural health aides are posted than at other sites. The study attributes this increase to referrals resulting from home visits by the aides.
- **Honduras/Integrated and Thailand/20 Province.** These projects report increased use of rural health facilities, although neither actual figures nor class of facilities is provided.
- **Niger/RHI.** Investigations preceding the 1978 project revealed that the number of visits to dispensaries by patients from villages with village health workers was approximately half the number of visits by patients from villages without CHWs. This has been attributed to use of CHWs to treat patients.

The projects for which process data were obtained are delivering increased prenatal, immunization, and family planning services to the target population. The status of other services is not mentioned in the reports that were reviewed. Generally, information on the quality of the services that are being delivered is not provided.

The PHC approach has the potential to generate a wider demand for immunizations, as the examples below show. Community health workers can motivate greater participation in vaccination campaigns. From the little information available, however, it is not possible to determine whether the reported increase in immunization coverage is due to this factor or to stepped-up immunization coverage in the project areas.

- **Bolivia/Montero.** A vaccination campaign in the project area was 260% more effective than an earlier, pre-project campaign.
- **Kenya/Kitui.** Immunization coverage rates of 90%-100% are reported for DPT and polio.
- **Dominican Republic/Health Sector.** Between 1977 and 1978, vaccinations of children under 10 against measles increased from 15% to 47% and vaccinations of women

of childbearing age against tetanus increased from 21% to 56%.

- **Thailand/Lampang.** Between 1974 and 1979, immunization of children increased in some areas by 12% (from 13% to 25% of the target population) and decreased by 10% in others (from 34% to 24% of the target population). In the control areas, decreases in coverage ranged from -6% to -20%.

CHWs are charged with promoting fertility control in their communities in all the projects with data on family planning acceptors. In the following three examples, however, it is not always clear if the increase in the number of family planning users is attributable to the use of CHWs.

- **Thailand/Lampang.** Between 1974 and 1979, the number of new family planning acceptors increased by 2%-15% in the project areas, and by 15%-30% in the control areas. In the baseline period approximately 50% of married women were using contraceptives. The health post volunteer (CHW) is credited with supplying contraceptives to 20%-30% of all users.
- **El Salvador/RHA.** Seventy percent of women using contraceptives obtained initial motivation and information from the rural health aide, a new category of village-level worker created by the project.
- **Dominican Republic/Health Sector.** In 1978, 14% of women in the 15-49 age group were using contraceptives, as compared to 8% in 1977.

Coverage, or the percentage of the population close enough to a health facility or CHW to obtain health care, is another measure of the system's potential to improve health. The information indicates that the projects are increasing rural populations' access (or, at least, *potential* access) to sources of health care. Areas that once were a day's walk from modern medical care may now have basic care available in the same village. Data from the following projects support this finding.

- **Thailand/Lampang.** Coverage increased from 20% at the beginning of the project (1974) to 70%-80% by 1979.
- **Bolivia/Montero.** The project staff estimated that they were reaching 44% of the population. A much smaller percentage had been reported before the project was implemented.
- **Niger/Diffa.** The 1980 evaluation team estimated that the deployment of village health workers has increased coverage 5%-15%.
- **Dominican Republic/Health Sector.** It is estimated that the population with access to health services has increased from 21% to 56%.

Data on Outputs

There is substantial information for all the projects on the status of outputs. Project monitoring reports (also known as Project Evaluation Summaries) clearly document that new facilities have been built in areas that once had no access to modern medical care; that personnel have been trained and deployed to provide basic health services in rural facilities; that the scope of services has been broadened and improved; that there are now trained CHWs in previously unserved areas; and that modest improvements have been registered in vital project-support activities, such as regularly supplying health establishments with drugs.

Unfortunately, a list of outputs does not indicate, for example, how well or how efficiently the personnel are functioning, nor how appropriate outputs are. The linkage between outcome and outputs is unclear, because outputs indicate only the potential to effect change. Still, outputs from the projects show considerable progress. For example, in the two projects in Thailand, approximately 52,000 village health workers have been trained. In Honduras, 3,000 traditional midwives have been trained; in Nepal, more than 1,600 paramedical personnel have been trained; and in the two projects in the Philippines, approximately 1,000 new community health aides have been trained. In Niger/Diffa and RHI, 600 new CHWs were trained, and 13,500 were given refresher courses. In Peru/ORDE-ICA, 1,600 health promoters have been deployed. In Pakistan/BHS, 600 new rural health centers were constructed. More than 500 new facilities were constructed in Peru/Extension, 60 in Panama/RHDS, and approximately 50 in Afghanistan/BHS.

OTHER INDICATIONS OF PROGRESS

Although data on the impact on health and service use are not available for many of the projects studied, in a number of countries the projects have been instrumental in bringing about important changes in national health policies and resource allocation which are facilitating the extension of basic health services to unserved populations. Progress has been noted in several specific areas.

For some countries, including Pakistan, Korea, Afghanistan, Bolivia, and the Dominican Republic, the AID-assisted projects have helped bring about a positive change in the government's policy toward providing health services to rural areas, and they have resulted in reordering resource distribution both within the health sector and among health and other sectors. Some changes in health priorities and the allocation of resources are described below.

- **Pakistan/BHS.** According to the 1981 evaluation of the project, the government's traditional budgetary and bureaucratic approach has been to favor the development of medical colleges (there are 15) and large hospital complexes in the cities. As the project has evolved, the government's health policy has clearly shifted toward development of a rural health system, using trained paraprofessionals.

- **Bolivia/Montero.** Through this pilot project, the MOH has become aware of the need for rural health care at the

village level, and it has begun to develop systems to link rural primary care with referral facilities. One of the project's major achievements has been to increase consciousness among key MOH officials that health needs can be met with a low-cost, community-based, preventive health care system.

- **Korea/KHDI.** The government has altered its health policies to focus on rural PHC, as opposed to urban hospitals. Budgetary allocations reflect these changes in priorities. Because of results from the health demonstration project, the Korean Health Development Institute (KHDI) has been influential in obtaining increased resources for the health sector. When the project began in 1976, the MOH budget was U.S.\$43 million; by 1981, when the project ended, the budget had been increased to U.S.\$256 million.

- **Guatemala/RHS.** Since the inception of the AID-assisted PHC projects, the government's budgetary allocation to rural health has been growing. Nearly 100% of new health sector capital investment has been in rural areas since the mid-1970s. Rural health care now receives 62% of the health sector budget.

- **Tunisia/RHS.** This project was instrumental in obtaining the government's commitment to invest in rural health service delivery. Since the project began, the Ministry of Education, in conjunction with the MOH, has altered the curriculum in the country's medical schools to reflect the growing emphasis on community medicine. The Ministry of Finance has begun to plan for recurrent costs of the new health programs in its five-year development plans.

The AID-assisted projects have, in a number of cases, served as models that have enabled governments to expand rural health care. The history of PHC in these countries illustrates the role that AID has played as a "risk-taker" and innovator, instituting new approaches when financial and economic justifications are not yet evident, and enabling countries to work out functional models. In some of the 33 countries, the PHC programs are internally funded and viable enough to attract the resources of development banks. The following are examples of projects that have been models for regional and national programs

- **Korea/KHDI.** The health insurance scheme put into effect in 1981 in the AID-supported demonstration area will be expanded nationwide. The World Bank is considering supporting nationwide replication of the PHC approach that was developed in the demonstration area.

- **Tunisia/RHC.** The project, although slowed down by contractor difficulties, is the basis for a national PHC implementation plan. The project area has been expanded from two to four provinces, and a World Bank project which is covering additional provinces is using a delivery system similar to that developed in the AID-assisted project.

- **Bolivia/Montero.** The project was the model for the much larger Rural Health Services project that covered three of the country's most populous departments.

- **Thailand/Lampang.** The project served as a model for

the expanded 20-province Rural Health Care Expansion Project, which is receiving substantial external support from the World Bank and AID.

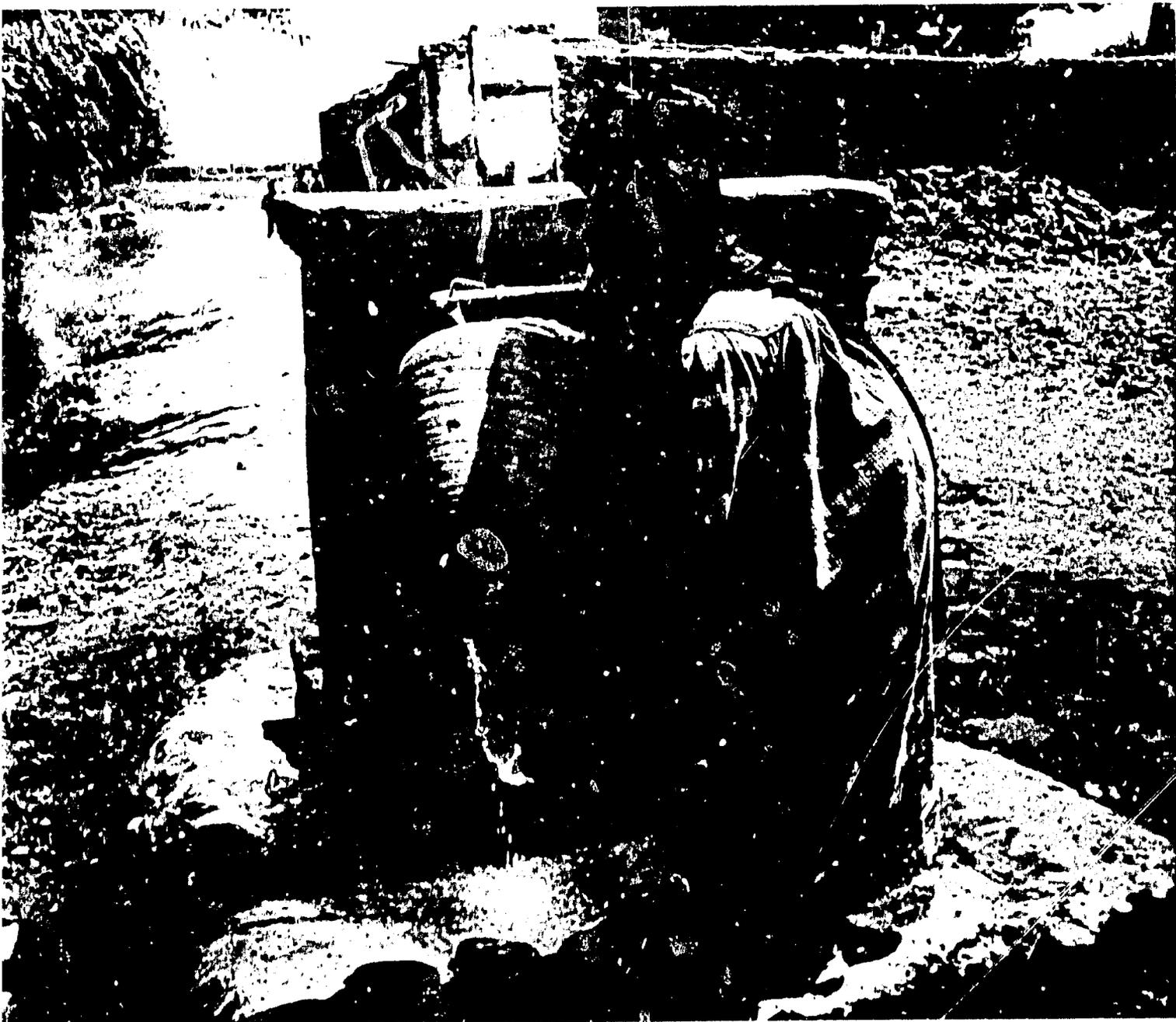
The feasibility of replicating the project's key features nationwide is also evidenced by Thailand's National Health Policy and Plan and by the Fourth and Fifth National Social and Economic Development Plans (1977-1981 and 1982-1986, respectively). In 1977, the Ministry of Public Health launched a nationwide village health volunteer and health communication training program which covered 22,400 villages in 1982—50% of rural villages. Remaining villages are to be covered by 1986.

To facilitate staffing and the financing of PHC programs, governments of several countries have enacted new legislation or changed existing laws. Among these nations

are Lesotho, Tunisia, and Senegal.

- **Lesotho.** The government has submitted a new health law to govern activities of nurse-clinicians and thus eliminate the legal problems that may arise when these personnel assume new functions as PHC agents.
- **Tunisia.** The government changed the law to permit non-physicians to treat patients in the project areas.
- **Senegal.** Legislation has been changed to permit the government to recover some costs by charging users for health services and drugs. This is important, because many national constitutions guarantee free medical care for the entire population. Most governments can afford to provide free medical services to only limited segments of the population.

In Egypt, a village woman fetches the family water supply at the communal tap. (UNICEF/I. Lippman)



AID project design and administration issues

This study has examined issues generic to operating primary health care (PHC) programs in developing countries. It concludes with an analysis of AID project design and implementation mechanisms which have had a significant impact on the execution of the 52 PHC programs. Although no special institutional analysis of AID was undertaken, institutional problems emerged during the research on PHC; these are the subject of this chapter. It should be kept in mind that these institutional problems probably affect AID projects in all sectors. Moreover, it is likely that many of the problems discussed occur in projects assisted by other large development organizations. Although the problems cited here are not encountered in all the projects reviewed, they are common enough to merit discussion. The first section of this chapter deals with design problems and their causes, and the following section examines problems more closely tied to project administration and support procedures.

PROJECT DESIGN ISSUES

Lack of Solid Criteria for Creating Projects

Although all the ramifications of a project's origins are not clear, implementation problems often can be attributed to how and why the project was created. The projects that were studied share common goals of strengthening and expanding existing health care systems. All, however, originated under a variety of circumstances.

Some projects build on earlier assistance from AID; others, particularly those administered by private voluntary organizations (PVOs), expand or improve already functioning PHC programs (e.g., Sudan/Southern and Nicaragua/East Coast.) Some (e.g., Bolivia/Montero and RHDS, and Nicaragua/PRACS and Rural Health) have emerged from recommendations following comprehensive national health sector assessments by AID or contract personnel in which the host country also participated. A few of the projects reflect primarily political considerations; they are the result of recommendations by the ambassador or the State Department that the U.S. "do something in the rural areas." The Bolivia/Chiquitos project was initiated at the request of the local Bishop and his secretary. The July 1979 evaluation stated that the project was created with no input from the government or individuals who would run the project.

There is no consistent policy to determine whether projects begin as pilot projects or start off on a large-scale. There are examples of both kinds of projects. Thirty-one of the projects are pilot or demonstration projects designed to test the effectiveness and cost of various services, staffing patterns, and technologies. These pilot projects serve

to improve planning when the project is later replicated on a larger scale. In the absence of a pilot project, poor decisions may be made, as is demonstrated by the Senegal/Sine Saloum project. This project began to fall apart shortly after implementation began, partly because of unrealistic assumptions about the number of health huts required and local financing. The 1980 "impact" evaluation of this project stated that "AID jumped into a massive, 600-unit health project without running a pilot project first. All or most of the problems could have been identified and avoided had we taken one Communaute Rurale and run an experiment."

Large regional projects are also designed to test and refine strategies (and sometimes as ways to divide a country among various external assistance agencies). Many of the "national projects" reviewed in this report began in one region or district and then expanded, over several years, to cover the entire country (e.g., Nepal/Integrated and Pakistan/BHS). The Dominican Republic/Health Sector project was launched in one of five regions and expanded to two additional regions each year thereafter. Some national governments co-sponsor several PHC projects that follow quite different models.

In practice, decisions to replicate a demonstration project on a large scale often are political rather than technical ones based on thorough evaluations of smaller projects. Also, governments may be convinced of the value of a project, based on observations and routine monitoring information, long before evaluation data are available. The Government of Thailand, for example, decided to replicate features of the Lampang model even before the results of the evaluation were known. The same thing happened in Bolivia, where the Rural Health Delivery System project was started before the Montero pilot project had been evaluated.

Reviewers from AID/Washington and USAID missions need to take a particularly critical look at proposals for projects that originate as expansions of unevaluated pilot projects, as a result more of political than technical decisions, or as regional projects that the government intends to consider neither for expansion nor for coordination with other PHC projects in the same country. The experience of the projects reviewed suggests that before any national PHC program is initiated, a comprehensive health sector assessment and a pilot project should be undertaken.

Politically or Geographically Unsuitable Project Sites

For both pilot and regional projects, the choice of location can be critical. Problems tend to occur when certain cri-

teria are not applied to the selection of sites for a project. The AID-assisted PHC projects have made important strides in making health services available in rural areas previously without ready access to health care, but efforts to undertake pilot projects in the more isolated rural areas have met with considerable problems. This review of projects indicates that sites should be:

- politically acceptable to the national government and to AID;
- areas where coordination with other development programs is possible;
- areas that are politically, socially, and economically typical of the entire country (or at least of rural areas); and
- areas that have at least minimal transportation and a communications infrastructure.

The following examples illustrate site-related problems encountered in the 52 projects reviewed.

- **Zaire/HSD.** Extreme transportation and logistical difficulties arose in trying to develop a pilot project located more than one thousand miles from the capital. Neither USAID nor the contractor foresaw the difficulties of the effort, and no contingency allowances were included in the contract. The area originally was selected because USAID had a large agricultural project there and was interested in providing social services as well.
- **Central African Republic/Ouham.** According to AID's Project Paper (1978), Ouham Prefecture was selected as the project site because the government already planned to expand health services in the area. Later, due to political considerations outside the realm of the project, the government wanted to change the location.
- **Niger/Diffa.** The lack of infrastructure in Diffa Province and the site's isolation from the capital caused a number of implementation problems. For example, the lack of banking facilities made payment to government and project staff difficult. Project staff were a one-day drive from the capital, where the central planning staff (responsible for supporting the project) of the Ministry of Health worked.

Lack of Attention to Cultural and Political Contexts

Many of the implementation problems that have emerged in the 52 projects can be traced to a design not suitable in the cultural and political contexts of the country. The following are examples of this problem.

- **Zaire/HSD.** Government dissatisfaction with the project design delayed implementation for six months. The Department of Health (DOH) objected to management training directed by the National Health Council (outside its authority). The minister felt such training was ineffective and infringed on the DOH's territory. He also felt that training additional professionals in the U.S. would constitute a waste of resources, because there already was a large group of nationals who had been trained in the U.S. but who were not being used properly. When the design

was changed to train a key group within the DOH, the minister immediately gave his support and resources.

- **Niger/Diffa.** Even before implementation began, an AID/Washington official questioned the project design because, he said, there was "no clear discussion as to how our inputs will permit or assist the GON to expand its capability." Furthermore, the official observed that "it is stated that [Niger needs] management and planning assistance, yet the GON is unwilling to accept this type of assistance." The government viewed the U.S. consultants not as advisers and trainers, but as another set of expatriate experts who would fill curative or other direct-service slots. According to three evaluations (conducted in 1980 and 1981), the advisers have indeed functioned in the latter role.
- **Central African Republic/Ouham.** The 1980 special evaluation of this project leveled serious charges against the project design, which, it contended, was incompatible with the MOH's management style and philosophy and dependent on scarce fuel. MOH officials are strongly influenced by French expatriates who believe that using mobile vaccination teams and small hospitals in the more populated towns is a much better approach to improving health than using village health workers and active participation, as the Ouham project proposed. Thus, in hindsight, the evaluators felt that there was little likelihood that the U.S.-conceived project would be taken over by the government's health services—one of the project's objectives.
- **Pakistan/BHS.** The 1981 evaluation attributed implementation problems partly to the fact that the standard MEDEX program being applied to rural Pakistan had not been adopted sufficiently to the geographical, social, and cultural conditions of the country.

Problems such as those described above are not typical of AID's PHC projects, but they occur often enough to be of concern. Several explanations are given below to show why AID's thorough project design process does not always obviate certain basic shortcomings.

Lack of Host-Country Participation

It appears that, in many countries, host-country participation in project design and planning is extremely limited. This more than any other factor accounts for the problems of poor site selection and the problems created by projects that are not culturally, politically, and administratively suitable. Frequently the key individuals, organizations, and offices involved in implementing projects are not systematically involved in planning, and some project planning documents are not even translated into the language of the host country. There are exceptions. In the Bolivia/RHDS project, for example, documents either were prepared in Spanish or were translated. And, in Botswana, the government participated actively in Botswana/HSD. Generally, however, closer collaboration between designers and host-country personnel at all levels is strongly recommended.

Lack of Continuity in Design Process

Another major reason for design problems seems to be that short-term consultants and AID mission personnel (who are also often relatively short-term) conduct the different steps in the design process. There are few, if any, persons who see the process through from its conception to its implementation.

Inappropriate Use of Short-Term Consultants

Short-term personnel who spend only a few weeks in-country are sometimes expected to prepare key planning documents. Although these individuals may be effective as advisers, expecting them to actually design a project is not reasonable. During their short time in-country, the consultants, even though they are usually technically competent, cannot develop an adequate appreciation of cultural and political sensitivities to ensure that basic design decisions are acceptable to key government officials and appropriate for the country. Moreover, the technical qualifications and experience of some AID direct-hire project designers may not be adequate for the job.

Pro Forma Use of Design Procedures

Several years may be required to complete AID's project design and approval process. During this time, several studies and planning documents are normally produced, including a Project Implementation Document (PID); a Project Paper (PP) that contains a social analysis, a financial and economic analysis, and statements on the environment and women in development; and a "logical framework" (Log Frame) of outputs, target dates, and assumptions. In the opinion of some observers, there are two reasons why this process may not eliminate basic design deficiencies and may overlook key administrative and political constraints. One, the process may be followed only pro forma to justify what has already been decided. Two, the bureaucratic procedures are so numerous and time-consuming that they, and not the substance of the findings, become the foci. AID procedures and close congressional oversight of projects often severely constrain or delay project approval from AID/Washington. Because of these constraints and certain host-country realities that must be glossed over in project plans, field staff come to view project plans as partially "fictional" and realize that they will have to be modified during implementation. As described in the following sections, the pro forma application of design procedures has a variety of consequences.

Insufficient Institutional Analysis

Judging from implementation experiences in the projects studied, institutional analysis during project design is insufficient or, at least, insufficiently critical. The weaknesses of the MOH and other implementing agencies are not adequately identified, nor is sufficient, realistic action planned to overcome deficiencies that would impede implementation of the PHC projects.

Unrealistic Project Targets

To ensure rapid approval from AID/Washington, the au-

thors of project papers sometimes inflate numbers of likely project beneficiaries and specific expected outputs (e.g., number of health workers trained, health posts built, etc.) to levels that would be unrealistic, given the time available and resource constraints.

Unrealistic Project Schedules

Many projects are planned to last three years. The experiences of the projects that were examined suggest that this is insufficient time to accomplish goals and achieve full impact. Typically, each step in program implementation takes longer than planned. Projects that accomplish their intended goals usually do so beyond the time planned, either after an extension has been granted or during a follow-on project.

The current, short time frames have a negative impact on projects' achievements. In projects with tight, unrealistic schedules, the emphasis may be on "deliverables" rather than institution-building (an example would be mobilizing village labor to build a certain number of latrines without developing community leadership, and without encouraging understanding of and appreciation for the activity). The omnipresent "delays" are demoralizing to project advisers, host-country personnel, and AID staff. Moreover, many projects have to revise their planned outputs, downward, because activities are proceeding far behind schedule. The 1981 evaluation of Pakistan's Basic Health Services project describes these points well.

The steps from the plans in a Project Paper to implementation in the field are beset with many obstacles. What appears to be an ideal and practical timetable on paper seems to disintegrate under the trying conditions of practice. Events have a way of intruding on the best of plans . . . [S]ome of them were utterly unexpected, for example, the evacuation of the technical advisers following the burning of the American Embassy facilities. Others, however, should not have been surprising and, indeed, many should have been anticipated from the resistance on the part of some government health officials to certain social and cultural barriers among the people.

The important point here is to note that in anticipation of a slow change, planners should be modest in their expectations. Targets should be set which have a reasonable chance of being attained. The Project Paper contained some which were attainable but it also included several which were beyond hope of achievement in the time allotted.

Typically, projects fall behind schedule because of delays by the host government in meeting the conditions precedent (legal conditions) for funds disbursement; delays in selecting and deploying technical advisers; delays in receiving vehicles, drugs, or other supplies from overseas; delays in obtaining approvals for modifications to the original project design and other crucial steps; and inefficiencies in the host government's administrative procedures. The following chart indicates the extent of such delays in the projects studied, as well as some of the principal causes.

It appears that the overestimation of potential achievements and the underestimation of time required to complete activities result in either distortion of projects' objectives or project extensions. Five to ten years, rather than three, would be a much more realistic time frame in which

EXAMPLES OF DELAYED IMPLEMENTATION

<i>Country/Project</i>	<i>Description of Delays and Extensions</i>
Bolivia/Montero	Extended five years because of long delays in contracting advisers, bureaucratic delays, and need for adjustments of project design.
Bolivia/Chiquitos	Two-year delay in receiving vehicle for mobile unit; longer delays for other supplies.
Bolivia/RHDS	Implementation delayed six months until loan agreement signed; government delayed more than one year to meet conditions precedent to funds disbursement.
Dominican Republic/Health Sector	By June 1980, Health Loan I was three years behind schedule.
El Salvador/RHA	Repeatedly extended because of civil unrest.
Guatemala/RHS	Extended two years.
Guatemala/SINAPS	Six months behind schedule.
Honduras/Integrated	Two-year delay in construction three training centers because of contracting and construction difficulties.
Panama/RHDS	Health-facility construction slowed because government was reluctant to construct buildings without requisite trained staff and equipment.
Egypt/Urban	Extended one year (to 1985).
Tunisia/RCH	More than three-year delay in contracting and deploying technical-assistance team.
Nepal/Integrated	Six-month delay in recruiting and fielding two critical advisers; new project, beginning in 1980, continued activities.
Pakistan/BHS	WHO management consultant two years late; after three years, CHW portion not started; project extended twice.
Korea/KHDI	Initial deployment of paramedics took more than three years.
Philippines/Bicol	Three and one-half years to plan project.
Philippines/PUSH	Six-month delay in signing grant agreement; followed by eight-month delay for government to meet conditions precedent.
Thailand/Lampang	Project extended several times, for various reasons.
Kenya/Kibwezi	One-year delay in construction.
Sudan/Northern	Great delays in receiving vehicles and spare parts.
Sudan/Southern	Behind schedule in all areas, except training, because of logistical problems, staffing, finances, and defining CHWs' role.
Zaire/HSD	Three-year delay in contractor selection and negotiations; further six-month delay because of government dissatisfaction with project design.
Central African Republic/Ouham	One-year delay to receive waivers for drug procurement.
Mauritania/Trarza	Six-month delay in signing project agreement for lack of translator and typists; further delay in signing technical assistance contract.
Niger/Diffa	One and one-half-year delay in recruiting advisers; project extended, redesigned; VHW training component canceled.
Mali/Yelimane-Koro	Various delays in Yelimane pilot area, because of logistical problems (poor climate, lack of fuel).

to build the in-country infrastructures that are needed to support a large-scale PHC system. Either projects should be planned to last longer than three years, or a well-integrated sequence of projects should be planned. For each project, a more realistic time frame should be developed to allow sufficient time to select the contractor, orient staff, and develop implementation plans; to enable countries to satisfy the conditions precedent; to await the arrival of commodities in-country; and to initiate and complete institution—building and community education and motivation activities. Sufficient time is also needed to experiment and to correct problems that arise once service delivery begins.

Lack of Design Flexibility

In several cases, technical-assistance field teams have identified the need for modifications in project design, but they have found that AID's procedures for making basic changes were cumbersome. Conflicts between the technical advisers in the field and staff at AID missions are not uncommon, as the following examples show.

- **Mali/Yelimane-Koro.** The contractor felt that modifications to the original project design were warranted by field conditions and observations, and that AID's contractual and procedural requirements were inhibiting its ability to conduct business efficiently with the ministry. The

AID mission, however, stood fast on the need to follow established procedures for any modifications. What resulted was a series of disagreements on such issues as whether the stipulated U.S. purchasing requirement could be waived for drug purchases.

- **Zaire/HSD.** The 1980 project evaluation attributed the general failure of this project to a poor project design. It cited numerous failures to comply with established AID design procedures, which, in turn, led to misunderstandings, disagreements, and poor interpersonal relations among the parties. Conflict arose when the contractor tried to change the pilot project site to a more accessible area near Kinshasa. Although the difficulties of working in the original area were apparent, the mission felt that the contractor was renegeing on the original agreement, and the contractor felt that the mission was insisting on the original site so that it could support a higher-priority agricultural project there at the expense of the health project.

The experience of the principal contractor for the Afghanistan/BHS project provides a contrasting example. The contractor attributed its successes in Afghanistan to the lack of a highly detailed and specific project plan that allowed for sufficient flexibility during implementation.

Greater flexibility in project design, although not a remedy for conflicts between AID and contractors, may facilitate the correction of poor project designs, and mid-course adjustments during the life of a project.

Changes in the Political or Institutional Environment

Changes in host-country government personnel and policies that are beyond AID's control may severely affect the appropriateness and ultimate acceptance of a project design. By the time a project has been approved and activities have begun, it is quite possible that the key government officials will have been replaced.

In sum, it appears that modifications of AID's project design and approval process may be necessary to substantially improve the technical, cultural, and political appropriateness of project designs. These modifications could take one of several forms. For example, the design "controls," such as the social, financial, and environmental analyses, could be used as critical techniques for evaluating a project proposal. Host-country personnel at various levels could be involved much more in project planning. More care could be taken in selecting short-term consultants to assist in project design, and giving them sufficient time in-country to consider cultural and political realities. Approval of realistic, as opposed to numerically impressive, project objectives would also enhance design.

AID PROJECT ADMINISTRATION ISSUES

Lax Monitoring of Project Implementation

AID monitoring of projects varies substantially from country to country. In several of the projects studied, monitoring by AID appears to be lax. AID mission staff are few in number, and often they are too busy with project plan-

ning and administrative tasks to closely monitor implementation.¹ AID/Washington's involvement in project monitoring varies greatly among the four regional bureaus. Also, formal project evaluations occur infrequently (in some projects) and often omit important indicators of the quality of project activities. (See Chapter VII.)

In the following projects, AID does not appear to have adequately monitored progress.

- **Senegal/Sine Saloum.** According to the 1980 "impact" evaluation, "AID has not provided adequately the one ingredient which the recipient country has every reason to expect—firm, experienced project management and technical assistance. The mission appears to have operated with a kind of 'arms-length' or 'hands off' style, taking the position that it was up to the Senegalese Government and the villagers to take responsibility and solve the problems."

- **Kenya/Kitui.** The 1980 evaluation reported that the AID mission in Kenya had a ready model, with the Kibwezi project only 100 miles away, to help the Kitui project increase community participation and improve other health-related activities. The mission, however, never arranged for an interchange between the two projects. Moreover, the mission failed to provide a member for the team that evaluated Kitui, even though it received a request and was given sufficient notice to do so.

- **Niger/Diffa.** The AID Auditor General's 1980 report criticized AID's oversight of the Niger/Diffa project. "AID [Washington] monitoring has been restricted to the review of Africare quarterly progress reports which lack sufficient information to measure success in meeting program objectives." According to the report, Africare's progress reports contain little evaluative information, and AID generally has left it up to the contractor to perform well, and with a minimum of supervision.

- **Nepal/FP-MCH.** The 1980 evaluation indicated that AID's Nepal mission had not kept as closely in touch with the contractor and the government implementing agency as it should have, thus permitting an unsatisfactory situation to develop.

In other projects, the problem appears to be a shortage of in-country AID personnel to monitor PHC projects.

- **Central African Republic/Ouham.** This project had to be monitored from the Cameroon, because no in-country staff were available. This delayed resolution of funding and administrative problems.

- **Sudan/Nothorn.** A health specialist arrived at the Sudan mission more than six months after implementation of the project began, leaving the project without technical supervision during its early stages.

In conclusion, project monitoring by AID is sometimes too lax to maintain the detailed knowledge of a project's status that would enable AID to identify problems early

¹Some observers feel that AID mission staff see their main task as obligating money, and not carefully managing disbursements to projects that already have been funded.

enough to find effective solutions. A change in personnel incentives might encourage mission staff to monitor ongoing projects more carefully. The need to define better the respective monitoring roles of the AID mission, the technical-assistance teams, and the host governments seems obvious, as does the need for additional health staff in the missions.

Conflicts Between Institution-Building and Service Delivery

In many projects, the parties involved (AID, host governments, universities, consulting firms, and PVOs) place different values on the objectives of institution-building and service delivery. Because the host-country is not generally sufficiently involved in the design of the project, these differences often are not resolved before the project begins. Generally, AID seems to be more concerned than the host governments with building institutional capabilities. AID's involvement in projects in Swaziland and Sudan is a case in point. In Swaziland/HMT, for example, AID is concerned with training personnel and establishing systems which will endure and function effectively after external support has been withdrawn. The MOH, however, is emphasizing operational accomplishments and the output of goods and services at this time. Similar conflicting priorities exist between the government and AID in the Sudan/Northern project.

In several other projects, however, requirements in AID's project-management process seemed to have impeded institution-building. For example, according to the 1979 evaluation of the projects in Haiti, "the pressures [on the contractor] to complete the 'deliverables' (some 17 reports) diverted attention from the longer term process of providing real technical education and assistance . . . because of the paucity of the local staff, it would appear that most of the reports were prepared without the ideally full substantive involvement of the people who will have the responsibility for implementation." Similar problems are noted in reports on the Zaire/HSD project.

The conflict between institution-building and service delivery is not easy to resolve during implementation. It should be resolved in pre-project negotiations between AID and the host governments. In some countries, AID faces a difficult task in convincing the host government of the utility of long-term institution-building. In countries where the government shows little interest in this activity, the projects have little possibility of creating stable PHC programs.

Difficulties in Mobilizing Technical-Assistance Teams

The transfer of skills for managing PHC programs is usually a principal objective of AID assistance. For most projects, AID enters into agreements (grants or contracts) with a PVO, a U.S. university, or a consulting firm to manage project implementation and to provide specialist skills in such areas as curriculum development, logistics, and information systems.

The technical advisory teams often have major responsibilities for project management. In Latin America, advisory teams play a major role in 7 of the 20 projects, in Asia, in 4 of 9 projects, and in Africa, in 16 of 18 projects. In the Near East, these groups have key management responsibilities in all 5 projects.

As discussed above, problems in contracting external technical-assistance teams satisfactory to all interested parties (the host government, AID/Washington, and the AID mission) and in deploying teams in the field plague many projects. The case of Tunisia/RCH is especially troubling. Because of the project's failure to field advisers, important activities were delayed for more than three years. Locating qualified individuals is particularly difficult for those projects that require advisers to live in isolated rural areas (e.g., Mali/Yelimane-Koro, Central African Republic/Ouham, Zaire/HSD, and Sudan/Southern).

Keeping advisers in the field is also a problem, because of living conditions, health problems, frustrations with work, questions about contracts, etc. In Sudan/Northern, the chief of party resigned within a month of his arrival, and the logistics adviser departed after fewer than 12 months on the job. In Mali, the original field adviser in Yelimane left after one year, and his replacement left after 6 months.

The advisers' technical competence generally has not been an issue, but language capability has been a handicap in some projects. In Haiti, for example, neither the long- nor short-term advisers spoke sufficient French to carry out their duties well. Similar problems have been noted in Niger and other countries.

Insufficient Skills Transferred by Technical-Assistance Teams

The role of expatriate project advisers and staff members varies greatly from project to project. In some projects, the advisory teams are well integrated into host-country implementing agencies, as in Afghanistan/BHS. In others, particularly those administered by PVOs, the external groups run the projects, with the host governments participating to varying degrees. Instances of the latter are most notable when the projects are in relatively isolated areas of the country.

A project design does not always incorporate mechanisms to facilitate the transfer of skills and management capabilities during implementation. Projects usually rely on training and expatriate technical advisers who work closely with counterparts, who gradually assume all responsibilities. (For a discussion of common problems in these mechanisms as practiced at this time, see Chapter V.) However, in many projects the establishment of physically discrete offices by the contractor serves to isolate advisers and limit their effectiveness in transferring skills. Also, in some cases, the government may not be particularly interested in the transfer of skills. The projects in Tanzania and Niger are examples.

• **Tanzania/Hanang.** According to evaluations (1979 and 1980), this project is one of several that risks being rela-

tively successful in the short run but remaining dependent on an external organization for its continuation.

- **Niger/Diffa.** The 1980 evaluations indicated that the government was so uninterested in transferring skills that it did not even provide counterparts. The technical-assistance team functioned almost exclusively as direct-service delivery personnel.

In trying to improve the transfer of skills, the planned transfer of expertise should be scrutinized more closely and a more realistic assessment should be made of the government's ability to provide counterparts and to integrate the long-term advisers into the host-country bureaucracy.

External Factors Beyond AID's Control

External factors—war, civil unrest, the overthrow of governments, and changes in key government officials—have played major roles in impeding the progress of at least a dozen of the 52 projects, including more than one-half of the Latin American projects. The effects of certain of these events are summarized in the following examples.

- **Bolivia/Montero, Chiquitos, and RHDS.** These three projects either have been suspended or terminated since the July 1980 coup. Earlier, frequent changes in governments and in ministers of health (eight in one and one-half years) were disruptive.

- **El Salvador/RHA.** Because of continued civil unrest, the project has been extended. At least 7 health workers have been killed, and 36 others have resigned. Still more have been transferred to more tranquil areas of the country.

- **Honduras/Integrated.** This project got off to a good start under a particular minister of health, but after he was replaced, resources for the project were cut back.

- **Nicaragua/PRACS, Rural Health, and East Coast.** These three projects were disrupted by civil unrest, beginning in October 1977, and by civil war, in September 1978 and May-July 1979. Except for the small East Coast project, AID has never substantially reestablished its input under the new government.

- **Guatemala/RHS, PRINAPS, and SINAPS.** Political violence in rural areas has delayed project activities and influenced the government's decision to de-emphasize community participation.

- **Central African Republic/Ouham.** The project was abruptly terminated because of the government's abridgment of civil rights.

- **Pakistan/BHS.** The November 1979 attack on the U.S. Embassy and the subsequent absence for approximately three months of University of Hawaii advisers nearly resulted in termination of the project by the government.

- **Afghanistan/BHS.** AID input ended when a pro-Soviet government came to power in 1979. It appears that PHC activities have since ceased.

A Guatemalan mother introduces fruit into her infant's diet. (World Neighbors)



summary conclusion

This review of 52 AID-assisted projects has raised numerous issues about the design and implementation of PHC projects. The commonality of problems encountered in different countries and regions of the world suggests that future projects can benefit substantially from the experiences of the present generation of projects.

This document should give project designers a better understanding of the program areas which require particularly careful planning and a sufficient commitment of financial and technical resources, as well as time. This

analysis has also outlined issues, tactics, and program activities which have not been studied, and which must be better understood in order to improve programming. It is hoped that new programs can focus on exploring solutions to some of the problems being encountered in existing programs. Finally, it is hoped that the documentation of project implementation experience from such a large number of projects can serve as a resource document in training courses for government and other personnel involved in designing and managing PHC programs.

In Africa, health workers make plans with village elders. (WHO/17096/J. Marquis)



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Barbara Turner, Bureau for Near East, AID/Washington

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