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**AID - Assisted  
PRIMARY HEALTH CARE  
PROJECTS:  
Summary Reviews**



**American Public Health Association  
International Health Programs  
1015 15th Street, N.W.  
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AID-ASSISTED  
PRIMARY HEALTH CARE PROJECTS  
SUMMARY REVIEWS

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**AID-ASSISTED PRIMARY HEALTH CARE PROJECTS. VOLUME I.**

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**AID-ASSISTED PRIMARY HEALTH CARE PROJECTS: SUMMARY REVIEWS**

The United States Agency for International Development (AID) is one of the major sources of external support for primary health care (PHC) programs in developing countries—projects aimed at making basic health services more widely available. In this report, the first of two volumes, 52 AID-assisted projects in Asia, Latin America, Africa, and the Near East are described. The second volume analyzes the status and prospects of these PHC projects. Both volumes will be updated at regular intervals.

The present report has several objectives:

- to give AID personnel and others an overview of the agency's PHC activities;
- to provide a framework for tracking progress and problems as project implementation proceeds;
- to brief AID consultants on assignment in countries where projects are active;
- to acquaint researchers, students, and others with current AID-assisted PHC activities;
- to assist AID staff and others in extracting both positive and negative lessons from AID's experience in PHC that will be useful in planning and implementing future programs and projects; and

to identify issues and problems in PHC development which merit further research.

The 52 projects summarized in this volume were selected in conjunction with health specialists in AID's four regional bureaus from a preliminary list drawn up from congressional presentations and annual budget submissions. At the time of selection, the sample included all of AID's active PHC projects.

Four criteria determined selection. Projects included in this series: 1) have as their goal the extension of health services to unserved populations, 2) are in operation or recently concluded, 3) use auxiliary health workers or community health volunteers, and 4) provide integrated basic health services. Projects that had not progressed beyond the planning stage were not included, as little could be learned from them about implementation. Projects providing services in only one program area, as is the case with many AID-assisted health projects, were not included either.

### Information Sources

Seven principal sources provided information for Volume I:

1. Project Implementation Documents (PIDs), preliminary assessments used in planning new projects.
2. Project Papers (PPs), the essential planning document. Several PPs and/or amendments may be approved over time for the same project.
3. Project Evaluation Summaries (PESs), brief evaluation reports of project implementation.
4. Special evaluations (available for only a few projects).
5. Cables, trip reports, and other project memoranda.
6. Consultant reports and project progress reports.
7. Interviews with Washington-based AID staff and visiting mission personnel, and with individuals from private and voluntary organizations, consulting firms, and universities with implementation roles.

Both the quality and volume of available information varied considerably from project to project. Overall, however, evaluation reports and interviews with project personnel were the most useful sources of information. The comments and review of project write-ups by AID mission staff also aided greatly in filling in information and making the reports more accurate.

Site visits were possible to only two of project sites—Egypt and Honduras—and these provided excellent first-hand understanding of the projects, as well as the opportunity to collect documents. In a number

of cases it was not possible to obtain important project documents: some could not be located in Washington; others (some evaluations) had not yet been released by the Missions; and other documents (particularly research reports and studies) were available only in-country.

It should be noted that these project descriptions were prepared from June 1980 to July 1981, and thus are not equally up-to-date.

#### A Note on "Country Statistics"

Each project summary contains a section entitled "Country Statistics." The table below indicates the standardized sources of the figures found in the "Country Statistics" sections. The statistics reported may well differ somewhat from those offered by other sources.

<u>Category</u>	<u>Year</u>	<u>Source</u>
Total Population (millions of people)	Mid-1980	1
Population Growth Rate (percentage)	Mid-1980	1
Infant Mortality Rate (per 1000 live births)	1977-1978	1
Rural Population (percentage)	1980	2
GNP Per Capita (in U.S. dollars)	1978	2
Life Expectancy at Birth (years)	1978	2
Adult Literacy Rate (percentage)	1975	2

1-1980 World Population Data Sheet, Population Reference Bureau

2-World Development Report, 1980, the World Bank

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**Asia**



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PART I

AID-ASSISTED PRIMARY HEALTH CARE PROJECTS IN  
ASIA

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Summer 1980

INDONESIA

IDENTIFICATION

Project Name and Number: Indonesia Village Family Planning/  
Mother-Child Welfare  
Project, Number 497-0305

Location: Nationwide

Project Dates: FY 1980 - FY 1985

Funding Level and Sources: USAID: \$10,000,000 (Grant)  
UNICEF: \$15,000,000 (Grant)  
FY 1979 - FY 1984  
BKREN: \$18,600,000 (Development  
Budget)

Ministry  
of  
Health  
(MOH): \$18,000,000 (Estimated  
Development Budget)

Responsible Offices: Health Officer, USAID/Indonesia  
Bureau for Asia; Office of Technical  
Resources; Population, Health and  
Nutrition Division; AID/Washington.

Principal Contractor: School of Public Health, University  
of Hawaii

Implementing Agencies: National Family Planning  
Coordinating Board (BKREN);  
Ministry of Health

COUNTRY STATISTICS

Total Population: 144.3 million

Rural Population: 80%

Infant Mortality Rate: 91

Population Growth Rate: 2.0%

Life Expectancy at Birth: 47

GNP Per Capita: \$360

Adult Literacy Rate: 62%



## SYNOPSIS

Employing mechanisms tested in pilot projects, the Village Family Planning/Mother-Child Welfare (VFP/MCW) Project will deliver maternal and child health (MCH) services to villagers through the established family planning delivery system. A flexible AID financing method and careful project design bode well for the project's ability to deliver basic health services to rural Indonesians.

## BACKGROUND

Family planning has been a major priority of the Government of Indonesia (GOI) since 1970. In that year, an autonomous government agency, the National Family Planning Coordinating Board (BKKN), was established, its chairman reporting directly to the President. The agency provides family planning services directly and channels funds through other organizations. Results have been dramatic, a drop in the population growth rate from 2.4% to 2.0% over the past five years. In addition to population control efforts, the government has demonstrated a growing commitment to reducing major forms of malnutrition in its under-five population: protein-calorie, vitamin A, and iron deficiencies; and dehydration due to diarrhea.

Population/family planning activities and nutrition/health efforts continued to function autonomously for some time in Indonesia. As a result of policy changes, attempts were made to integrate these two distinct efforts. A number of pilot projects were established to demonstrate the feasibility of program integration, including the Village Family Planning/Maternal Child Welfare Pilot Project in East Java; East Java Village Family Planning/Maternal Child Welfare Pilot Project Expansion, and the Bali Village Family Planning/Maternal Child Welfare Pilot Project.

AID funds for these pilot projects were allocated from the Indonesia-AID family planning program (497-0270). In the distribution of these funds, authority was delegated to USAID/Indonesia to fund projects up to \$500,000 without prior authorization from AID/Washington. This fact appears to have had a significant positive impact on AID-supported development programs in Indonesia.

The Indonesia Village Family Planning/Mother-Child Welfare Project evolved from government efforts in both family planning and nutrition. It's goals are linked to the Government's Third Five-Year Development Plan, which aims to:

- integrate nutrition and family planning activities;
- reduce infant and child mortality and maternal mortality;
- expand nutrition services; and,

reduce the crude birth rate.

### PROJECT DESCRIPTION

Nutrition services will be delivered via the family planning network to villages where family planning practices have been well established (50% or more of all eligible couples using contraceptives). By working through the family planning infrastructure, the government strives to improve significantly its capacity to deliver nutrition services. Unlike most government delivery systems, the family planning infrastructure extends into villages through a network of volunteers and community organizations: a large corps of highly successful and respected field workers work at village and sub-district levels. The VFP/MCW project will train these single purpose family planning workers to assume new supervisory responsibilities and to guide organizations in implementing nutrition and health activities.

The government has made an effort to insure that the health workers remain volunteers. According to the project paper, the early experience of the village level family planning workers program has shown the detrimental effects of direct payment for community service. Evaluations in Central Java and Yogyakarta indicated that monetary incentives encouraged participation in the program solely for the sake of money, and destroyed the rural social tradition of reciprocal cooperation (gotong royong) in communal activities. Pilot experiments, however, indicate a real need to provide some form of compensation for "out of pocket" expenses for local transportation, poster production, and supplies.

Development funds will be used for a variety of locale-specific activities that will enable the villages gradually to assume fiscal responsibility for implementing nutrition activities, such as the taman gizi group feeding sessions, and to general income through rural village cooperatives. Evaluations will give special attention to the participation of community organizations in managing and implementing project activities, and to the progress being made toward village self-sufficiency in meeting nutrition needs.

The government deliberately has chosen to avoid external food assistance as a direct project intervention to achieve nutritional normalcy among young children. Officials from the National Family Planning Board and the MOH are convinced that nutrition education based on local foods has more lasting value and impact. Accordingly, project inputs include food purchased from local marketplaces to be used in the weekly (eventually monthly) taman gizi group cooking and feeding sessions.

There is no provision in this project for the costly sustained daily feeding that characterizes many nutrition reha-

bilitation programs. The plan instead is to focus directly on the major constraint to success in this project -- the very limited food supply at the family level, usually a direct result of low income. Project inputs will support innovative, local level development efforts designed to improve:

- the capacity of rural families to prevent malnutrition among their young children through better use of available food, as well as more efficient use of income for purchasing food;
- the information base and resources needed at the village level to increase food production from home gardens and other agricultural activities; and
- the organizational, management, and marketing skills needed by village womens' groups to initiate and maintain viable income-generating activities.

Successful implementation of the development activities outlined above will require strong regional and local level project planning and management organizations, effective in mobilizing and coordinating the efforts of several sectors (agriculture, animal husbandry, cooperatives, university research facilities, etc.) not usually involved in family planning and/or health and nutrition programs. The BKKBNS in East Java and in Bali have begun to facilitate intersectoral coordination through the establishment of project development and management teams at the provincial, regency, and sub-district level, with representation from several participating agencies and institutions. Continued GOI commitment to and support of these project management teams-- through inservice training workshops and program review meetings-- will be necessary if food and nutrition development resources are to be channeled effectively to the village and, ultimately, to the family level.

Each village will receive assistance for three years (in previous programs, the government provided assistance for only one year). This arrangement has two purposes:

1. Specified project components can be introduced step by step into the village.
2. The village will have time to use the development funds to establish mechanisms to support nutrition and food activities after the period of assistance ends.

Because the project emphasizes the delivery of health services, it is funded from AID's Health Functional Account. At the mission level, however, the population officer is managing the project, since services are delivered via the family planning

infrastructure. Integration is planned between the VFP/MCW project and other projects managed by the mission office of health and nutrition.

The Government of Indonesia's VFP/MCW project is expected to serve an estimated 21,500 villages, utilizing external support provided by USAID and UNICEF. Services and activities will be as follows:

- a) Orientation workshops for provincial and regency level officials.
- b) Training workshops for regency and sub-district level technical staff and village cadres.
- c) Village services:
  - equipment: scales for infant and child weighing, cooking sets for supplementary feedings, educational aids
  - medical supplies: Oralyte for children under five years of age for diarrhea, iron folate pills for pregnant women, vitamin A capsules for children one to four years of age, deworming medication for children under five years of age
  - monitoring supplies: growth charts, reporting forms

Other inputs funded by AID will depend on the development activities proposed by individual communities.

#### IMPLEMENTATION EXPERIENCE

The piggy-backing of nutritional services onto the family planning program is a major structural innovation in the delivery of health/nutrition services in Indonesia. The program's success depends on its ability to integrate its nutrition services with those of other ministries, particularly the MOH, which will provide essential technical assistance, logistical support, and referral services. Provincial, regional and sub-district Project Development and Management Teams have been formed to facilitate and ensure integrated planning and programming. The teams include representatives from the BKKBN and the Ministries of Health, Agriculture, Social Affairs, and Religion.

Because the project design requires a great deal of flexibility in funding and sub-project development, the AID funding mechanism known as local cost funding will be used. Briefly, this mechanism allows rapid and direct disbursement of project funds to the Provincial Project Development and Management Teams on the basis of Project Implementation Letters (PILs). The PILs will

include sub-project proposals from the provinces which will be reviewed by the central BKKBN and AID. Because the funding mechanism is flexible, projects can be developed in accordance with local needs, sociocultural factors, and local capacity to deliver services. Because it is rapid, it fosters and maintains local initiative and participation in project development. PILs will be used to prepare for each region the implementation schedule for specific program components, to determine the amount of supplies needed in each project area, and to develop and evaluate activities. This mechanism has been used with great success by AID to assist the Family Planning Program. It has been evaluated fully in the document entitled AID's Role in Indonesian Family Planning: A Case Study with General Lessons for Foreign Assistance (AID Program Evaluation Report No. 2, December 1979).

Administrative support and commitment to the project have evolved rapidly since the BKKBN prepared the project plan. A legal mandate was issued giving the BKKBN authority to deliver nutrition services. Subsequently, a policy to integrate nutrition and family planning programs was set forth in the Third Five-Year Development Plan. That policy has been supported by both the MOH and the BKKBN, which have committed portions of their budgets to the project.

As stated above, the program will use the family planning program delivery mechanism, manpower, and monitoring system. The Family Planning Program has a record of effective program administration and management and has contributed to a rapid decline in the fertility rate. The AID local cost funding mechanism and AID staff have greatly assisted the BKKBN in developing this efficient and effective system.

The design for the nutrition services components is based on the MOH Family Nutrition Improvement Program (UPGK), assisted by UNICEF, and on primary health care activities implemented by private non-government organizations and university community medicine programs.

Use of the local funding mechanism means that the responsibility for sub-project development and funding rests with the mission office, specifically, the technical office in charge. In the Family Planning Program, this mechanism provided the opportunity for intensive interaction and cooperation between the GOI and the AID team.

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AID's Role in Indonesia Family Planning: A Case Study with General Lessons for Foreign Assistance. AID Program Evaluation Report No. 2, December, 1979.

Dr. James R. Heiby. Trip Report, Indonesia, DS/POP/R. February 1-17, 1980.

Project Paper. Indonesia Village Family Planning/Mother-Child Welfare (497-0305). USAID/Jakarta, Indonesia, October, 1979.

### Interviews:

Dr. Dave Calder, AID/JKT/HN.

Dr. James Heiby, DS/POP/R.

Dr. Harold Rice, Asia/TR.

Summer 1980

KOREA

IDENTIFICATION

Project Name and Number: Health Demonstration Project, Number 489-0710

Location: Three rural counties in Kangwon, Gyeong Sang, Buk, and Cholla-Buk Provinces.

Project Dates: FY 1975 - FY 1980

Funding Level and Sources: AID: \$5 million (loan); Government of Korea (GOK): \$1.6 million

Responsible Offices: AID Representative, USAID/Korea  
Bureau for Asia; Office of Technical Resources; Population, Health and Nutrition Division; AID/Washington

Contractors: No major U.S. contractors

Implementing Agencies: Korea National Health Council; Korea Health Development Institute

COUNTRY STATISTICS

Total Population: 38.2 million

Rural Population: 51% Infant Mortality Rate: 38

Population Growth Rate: 1.6% Life Expectancy at Birth: 63

GNP Per Capita: \$820 Adult Literacy Rate: 91%

SYNOPSIS

The Korea Health Demonstration Project assists the Government of Korea to (1) implement and evaluate primary health care projects and (2) support pilot primary health care systems in three counties. Of the two aspects of the project, the first (institution building), is the more successful. Because of implementation delays, the impact of the pilot project on health status in the three project counties must await future evaluation.

## BACKGROUND

Only 15 percent to 20 percent of persons needing medical attention had access to hospitals or clinics in rural Korea in 1975. The Korea Health Demonstration Project was established to develop a new system for providing health care to low-income Koreans at a cost affordable to the Government of Korea and to health care recipients. In this project, health care includes basic promotive, preventive, and curative services.

## PROJECT DESCRIPTION

The objectives of the Korea Health Demonstration Project were to augment the GOR's capacity to plan, conduct, and evaluate low-cost integrated health services projects and to successfully demonstrate this capability in a multi-county ("gun") health delivery project replicable in other parts of Korea.

- The Korea Health Development Institute (KHDI) trains para-medical personnel, Community Health Practitioners (CHPs) and Community Health Aides (CHAs), to work in primary health units (PHUs) in townships attached to the existing health structure in the three health demonstration counties.
- The KHDI promotes health through public information and education campaigns and coordinates efforts to improve environmental sanitation and hygiene.
- The KHDI retrains traditional midwives and recruits and trains volunteer village-level health agents (VHAs) to assist CHPs and CHAs in villages.
- The KHDI conducts an experiment with health insurance and other schemes to finance community health services.
- The program plans to upgrade the training and practice standards of local druggists. A 1972 baseline study found that 75% of acute disease sufferers were not treated at medical institutions, but rather took medicines prescribed by druggists or recommended by friends.

Staffed by 20 health professionals, including physicians, statisticians, nurses, and researchers, the KHDI also conducts studies on health status and administers the multi-county Korea Health Demonstration Project which incorporates and augments pre-existing health services in Hongchon in Kangwon Province, Guneo Gur in Gyeong-Sang Buk Province, and Okgu Gunin Cholla-Puk Province. The populations of the three counties are 114,000, 64,000, and 66,000 respectively, and predominantly rural.



## IMPLEMENTATION EXPERIENCE

Many of the outputs planned in the KHDI project have been accomplished. With the assistance of AID, the Korea Health Development Institute has implemented an innovative approach to rural health services delivery using paramedical personnel, village health volunteers, and other intermediaries. The demonstration project is attempting to augment the existing governmental health service with a referral system.

Despite the project's accomplishments, USAID support will end in 1980, and there is some doubt that the Government of the Republic of Korea will fund the KHDI at the present level after USAID support is withdrawn. Some doubt has been expressed about the financial ability of the host government to replicate the 3 county demonstration project, and this will be the main focus of the AID-sponsored end-of-project evaluation scheduled for the fall of 1980. In addition, the AID Health Evaluation Group has tentatively decided to include the Korea Health Demonstration Project in its study of the impact of AID health projects on health status.

Even though baseline data on health status were collected by KHDI in the three counties of the demonstration project for the purpose of showing project impact on health status, the hope that impact can be measured in 1980 is remote because:

- the actual implementation phase of the fielding of paramedics in rural areas together with health promotion work at the village level has been in place only since late 1978; and,
- project planners overestimated the target population who could be reached (250,000 in 3 counties). As of spring 1979, only 23 CIPs and 106 CHAs had been deployed. These workers provided a primary health care adjunct to 14 already existing community health centers and 3 county health centers. Separating out the impact of project workers from that of other health care providers and tracing the project's impact on such a large population will be an ambitious undertaking.

Though impact data may be difficult to obtain, other data which have been collected by the KHDI are useful. In April 1979, Ha Cheong Yeon studied the costs of health services in county health centers, pre-existing community health centers, and demonstration project primary health care centers. Data analysis reveals that the average cost per service contact with a county health center was \$7, whereas the average cost per contact with community and primary health care centers (including some pre-existing units) was only \$2. Thus, KHDI succeeded in making health services both cheaper and, theoretically, more accessible in the project areas.

A constant problem in primary health care delivery is the motivation and support of health workers involved in illness prevention activities. The July 1978 AID mid-term evaluation of the Korea Health Demonstration Project recommended that preventive activities in the demonstration project area be upgraded and supported more fully. In April 1979, Yeon found that workers staffing primary health care units in Gunee and Hongcheon counties devoted only 8 percent of their time to preventive work. In Okgu County, the workers spent even less time on such activities — 4 percent. When MCH activities were included in the definition of prevention, the percentages increased to 20 percent, 16 percent, and 8 percent, respectively, in the three counties.

One of the most innovative features of the Korea Health Demonstration Project is the experimental use of insurance to pay part of the cost of primary care. KHDI selected Okgu County for health delivery projects directed mainly to low-income families.

One objective of institution-building is to change the attitudes of Koreans toward prevention and the value of public health campaigns. The KHDI, created outside the structure of the Ministry of Health amid controversy, has gained a measure of legitimacy. In December 1979, the KHDI was accorded permanent status as the official research institute exclusively in charge of health-related studies for the Government of the Republic of Korea.

Notwithstanding the difficulty of impact evaluation, the dominance of curative over preventive activities, and other points raised in this review, the KHDI project has accomplished many of its objectives. The project paper expressed the hope that institution-building and changing the climate of opinion among physicians and other health workers would be important results of the project, and that the project would make an invaluable contribution to the process of determining future Korean policy in the health delivery field. Whether the Korean government will fund the KHDI at current levels after AID support is withdrawn at the end of 1980 remains to be seen.

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July 1978.

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"Maul Geon-gang Saup Community Health Project." Korea Health  
Development Institute brochure, 1979.

Smith, Kenneth. "1980 Evaluation Requirements for the Health  
Demonstration Project of KHDI," consultant report. February 1980.

### Interview:

Dr. Donald MacCorquodale, May 23, 1980.

Summer 1980

**NEPAL**

**IDENTIFICATION**

Project Name and Number:	Population/Family Planning Project Number 367-0096
Location:	Nationwide; eventually the program will be integrated into the expanding Integrated Health Services Program.
Project Dates:	FY 1968 - FY 1980
Funding Level and Sources: (FY 1976 - FY 1979)	USAID: \$6.7 million Government Of Nepal: \$4.7 million Others*: \$1.1 million
Responsible Offices:	Health Officer, USAID/Nepal  Bureau for Asia; Office of Technical Resources; Population, Health and Nutrition Division; AID/Washington.
Principal Contractors:	University of California, Berkeley, FY 1974-FY 1978 (assistance in program management, implementation innovations, training and management of field staff, and program component evaluation).  Westinghouse Health Systems, 1976-present (establishing commercial retail sales of contraceptives).
Implementing Agency:	Ministry of Health (MOH)

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\* Contributions came from numerous other donors, including UNFPA, UNICEF, WHO, and the governments of Japan, West Germany, India, the Netherlands, and the United Kingdom.

## COUNTRY STATISTICS

Total Population: 14.0 million

Rural Population: <u>95%</u>	Infant Mortality Rate: <u>133</u>
Population Growth Rate: <u>2.4%</u>	Life Expectancy at Birth: <u>43</u>
GNP Per Capita: <u>\$120</u>	Adult Literacy Rate: <u>19%</u>

## SYNOPSIS

For many years USAID has supported Nepal's family planning/maternal and child health (FP/MCH) program. Although the program has made significant advances in establishing a delivery system and in field-testing innovative delivery tactics, it has yet to have a measurable impact on the country's population growth rate. The program is gradually being integrated into the national Basic Health Services scheme.

## BACKGROUND

Nepal's demographic situation could serve as a case study of world population problems. The population growth rate has increased in recent years to approximately 2.5 percent annually. The most fertile areas are especially overcrowded. The economy barely keeps pace with the annual population increase, and the country's low economic productivity greatly inhibits the delivery of basic services. While over 90 percent of the population is dependent on agriculture, deforestation and erosion are serious and worsening problems that threaten the food base. The population is characterized by diverse languages, customs, castes, and clans. There is a strong sense of tradition and adherence to the social structure. Poverty and illness are widespread.

Fledgling efforts to institute a national family planning program reached a milestone in 1968, when the Family Planning and Maternal and Child Health Board was created. Private as well as government family planning programs have been active since then, many supported by USAID. In 1970, USAID assistance was expanded to include integrated maternal and child services, such as immunizations of mothers and children and ante- and postnatal care.

By 1973, the FP/MCH program had achieved notable program progress in staff development, publicity, public interest and support, and physical infrastructure. The program established a

network of FP/MCH centers in 52 of Nepal's 75 districts. One hundred and fifty FP/MCH service centers were providing basic contraceptive information and services, as well as elementary MCH services, to married couples. Ninety-two participants had completed training, and an additional 32 were in training. In-country training programs had prepared 407 health aids. Political support for family planning was confirmed in repeated public statements. Family planning public relations became highly visible.

In spite of these successes, three key problems had not been solved. Coverage was inadequate, performance was low, and too few health facilities were in areas where the population was concentrated. New program designs and experimentation with delivery systems suited to Nepal's special circumstances seemed to be needed.

#### PROJECT DESCRIPTION

With USAID/Nepal and other donor assistance, e.g., (UNICEF, UNFPA), a new five-year project (FY 1974-FY 1978) was initiated. The objectives were to:

- strengthen the existing program by upgrading the technical, administrative, and managerial skills and performance of program personnel; and
- develop through carefully planned, small-scale experiments a set of service delivery modules with a demonstrated capacity to recruit and sustain a relatively high percentage of target couples practicing family planning.

Four pilot programs were implemented. These tested the use of clinical services and personnel; the provision of services through non-clinic-based field workers; use of mobile sterilization camps; and use of commercially-based delivery systems.

USAID contributed technical and commodity assistance, funded participant training, and furnished local currency budget support. UNICEF provided medicines and equipment. UNFPA supported the construction and supply of new health facilities, contributed towards transportation and equipment costs, and provided technical and financial assistance to the Institute of Medicine.

By the end of the project (FY 1977-FY 1978), 492 service centers were providing FP/MCH services in 62 of Nepal's 75 districts.

In September 1978, an extension of USAID's Population/Family Planning Project was approved to increase technical assistance,

participant training, commodities supply, voluntary surgical sterilization, and village-based worker training.

### IMPLEMENTATION EXPERIENCE

A 1980 evaluation team concluded that the essential purposes of the project have been met. By the end of FY 1973, the FP/MCH organization was operating in 62 of the 75 districts in Nepal. Between 1968 and 1979, 136 Nepalese had received long-term training abroad; 90 had been in training for three to nine months, and 54 had received short-term (three months or less) training. Not all of those who had been trained are working in the FP/MCH project, but the impact of U.S. training is evident. Vasectomy and laparoscopy services are being provided on demand to an increasing number of acceptors each year at temporary camps and in Kathmandu. By the end of FY 1978, the FP/MCH had begun to expand use of two services delivery models; surgical contraception had increased and more outreach workers had been employed.

Acceptance of pills and condoms as contraceptive methods increases annually. However, there is, as yet, no measurable impact on the population growth rate. There are indications that the nation's mostly rural population is becoming more aware of the availability of contraceptive methods and of the services provided by FP service facilities. Although the availability of MCH services has increased, it is estimated that these services reach only 10 percent of all pregnant women. Many rural women's resistance to family planning remains to be overcome.

Three particular program components, heavily supported by USAID, merit special mention. These are the commercial contraceptive delivery system, village outreach workers, and mobile sterilization camps.

Advisors from the University of California at Berkeley suggested using village outreach workers to supplement the services provided by family planning clinics. This approach was innovative and has resulted in increased service accessibility. In FY 1979 the FP/MCH Project added over 450 new field workers and supervisors (100 percent funded by USAID/Nepal). Reports on their training and placement are incomplete.

In the current Five Year Plan period (1975-1980), outreach services from community FP/MCH clinics were extended by introducing panchayat-based health workers. These workers deliver FP/MCH services during home visits. Their duties are to provide villagers with family planning information (including the time and location of surgical contraceptive camps) and contraceptives (condoms and pills) and to motivate the target groups to accept IUD insertion, Depo Provera injections, and surgical contraception. Moreover, they are trained to treat common conditions such as diarrhea, scabies, and eye infections and to assist in giving

immunizations at static clinics. These workers are the project's link from the district to the central level. They are recruited on the basis of their interest, status in the village, natural leadership qualities, and motivational abilities.

The commercially-based contraceptive delivery system has not been successful in moving toward financial self-sufficiency, but it has been very successful in publicizing and desensitizing family planning as an issue. The project has promoted family planning in radio broadcasts and in a national contest to find Nepalese names for the condom and the pill. The project has also made contraceptives more widely available. By the end of 1979 over 400 shops/stores were selling contraceptive pills, and over 2,000 were selling condoms. The program continues to make a unique contribution to Nepal's family planning efforts.

Mobile sterilization camps, held since 1972, have made laparoscopy and vasectomy services available in many areas without fixed medical facilities. Many physicians and other medical personnel have received special training in Nepal and abroad. In some areas of Nepal, this program is proving to be quite expensive; equipment and staff must be transported by air because of the difficult terrain. There has been an expressed need for better follow-up, for at least one medical professional to remain in the area several days after the camp ends to handle post-operative problems.

In accordance with government plans, the FP/MCH network of clinics and personnel is being incorporated gradually into a national Basic Health Services scheme. Integrated services would seem to be an economic necessity in a country as impoverished as Nepal. However, some people fear that integration will dilute the effectiveness of the FP/MCH program.

Through a new project approved in May 1980 (Integrated Rural Health/FP Services, 367-0135), USAID is following the Government's lead in incorporating separate health, family planning, and malaria projects into one large project. (See summary of Integrated Health Services Project, Number 367-0126.)



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Grant-Swezy debriefing, May, 1980.

Interviews:

Laurie Mailloux, Ph.D., Anthropologist, USAID/Nepal, June 17, 1980.

William Oldham, M.D., former Health Officer USAID/Nepal, June 9, 1980.

## NEPAL

IDENTIFICATION

Project Name and Number: Nepal Integrated Community Health Service Project, Number 367-0126

Location: Gradually expanding over several years to become nationwide.

Project Period: FY 1973 (as 367-0277) - FY 1980

Funding Level and Sources: USAID/Nepal: \$2.6 million  
(FY 1976-FY 1979)

Government of Nepal  
(HMG): \$17.9 million

Others\*: \$5.3 million

Responsible Offices: Health Officer, USAID/Nepal  
  
Bureau for Asia; Office of Technical Resources; Population, Health and Nutrition Division, AID/Washington

Principal Contractor: Management Sciences for Health, Inc., consultants in health management, planning, training, and commodity logistics, 1975-1980.

Implementing Agency: Ministry of Health (MOH)

COUNTRY STATISTICSTotal Population: 14.0 million

Rural Population: 95%      Infant Mortality Rate: 133

Population Growth Rate: 2.4%      Life Expectancy at Birth: 43

GNP Per Capita: \$120      Adult Literacy Rate: 19%

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\* Includes WHO, CIDA, UNICEF, UNDP, IDRC, IBRD, United Missions of Nepal, Dooley Foundation, etc.

## SYNOPSIS

The Integrated Community Health Services Project aims to forge a PHC delivery system in Nepal by uniting the structures of several vertical programs, retraining their personnel and giving a new emphasis to program outreach. At present, these processes have begun but are far from complete.

## BACKGROUND

Having ended its isolation from the modern world only in 1952, Nepal faces a long and challenging road to modernization. Government health programs in Nepal originated as categorical programs for family planning/maternal and child health (FP/MCH) and for the eradication or control of leprosy, tuberculosis, smallpox, and malaria. These programs, especially malaria and FP/MCH, developed extensive staffs, facilities, and activities. In the 1970s, His Majesty's Government (HMG) adopted as a national goal the integration of vertical health programs into a nationwide primary health care (PHC) system.

From 1972 to 1975, USAID supported pilot projects in two of Nepal's 75 districts. In 1975, HMG, WHO, and U.S. health experts jointly assessed experiences in the two pilot districts and concluded that the concept of and methodology for integrating Nepal's categorical health programs were valid. The pilot projects demonstrated that modestly educated multipurpose health workers trained to provide basic preventive and curative medical care could effectively deal with the majority of Nepal's health problems. Unfortunately, the failure to institutionalize good management and supervision, even in the pilot areas, soon resulted in a breakdown of the delivery system.

## PROJECT DESCRIPTION

The Integrated Community Service Project\* was initiated to assist HMG in organizing and managing an effective integrated basic health service. The nationwide system would use multi-purpose home visitors to extend the coverage of the rural health unit. The specific project outputs planned were the following:

1. Development of Basic Health System Management and Control Systems

Health posts established; supervisory functions assigned; management health statistics, information systems and logistical and supply systems created; HMG budget and personnel systems reorganized; and a MOH Planning Cell augmented and trained.

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\* This project supports the creation of the Integrated Community Health System, also called the Basic Health System (BHS).

## 2. Training of Health Workers to Meet BHS Needs

Inservice training provided and an Institute of Medicine created.

In accordance with these plans, the phased integration of vertical project activities (FP/MCH, malaria, TB/leprosy, small-pox) and of some vertical project staff (at field and district supervisory levels) has begun. Outreach efforts and community support have been emphasized. More decentralized planning and implementation are occurring at the regional and district levels.

In the new integrated health system each rural health post conducts vertical project activities and provides some primary health care services at a level defined by the stage of health post development. There are 3 categories of health posts, some offering a fuller range of services than others, and some more integrated than others. At present, most fall into the least developed category. The plan is for each health post to pass through the three stages of service delivery and staffing, the complexity of each stage increasing as development continues. According to plans, after five years, 10 percent of the posts are to be fully integrated. In integrated areas, vertical project activities are covered by vertical program personnel who are retained by the ICHS to perform additional tasks.

Local communities are expected to support health posts through contributions of land, labor, and construction through materials. They also are expected to establish and participate in community health committees.

Because of the limited resources, only minimal health care is provided at the rural health posts. It is strongly preventive and, at its most basic level, (that of the outreach workers), emphasizes FP/MCH, rehydration of diarrhea, health education, surveillance, recording of vital events, TB/leprosy treatment and follow-up, and minor first aid. District level supervision and control of health posts also begins at its most elemental level (a single health inspector) and increases in complexity as health posts do. Health posts are referral points for outreach workers. Extremely difficult transportation, however, makes referral problematic.

Maximum coverage is achieved through outreach efforts. Field workers visit each household 2-12 times a year, spending enough time at each house to develop rapport and discuss such issues as child care and sanitation. Outreach activity and personal contact are the heart of the ICHS. The field workers are trained in preventive medicine. They assist health aides from the rural health posts in vaccination campaigns. They neither provide

curative care, nor do they dispense drugs other than rehydration solution and TB medications. They receive a fullscale salary from the government, part of which is presently being subsidized by AID.

Almost the entire ICHS Project is innovative for Nepal. It's strategy fits in very well with WHO's conception of providing basic health services for all by the year 2000 — relying heavily on community support, auxiliary health manpower, and low cost preventive efforts.

In Nepal, non-Western health care is widely available, even in the rural areas, and is provided by two main categories of practitioners: the ayurvedic physicians and the spiritual healers (domi/jonkris). The ayurvedic physicians are found in the market towns, and dispense a combination of ayurvedic and western-style drugs. Their training ranges from formal training in one of the Ayurvedic College of Medicine in India, to informal apprenticeships. The domi/jonkris are found at the village level, and provide treatment for ills that are considered spiritual in nature.

One unusual project policy is its intention to incorporate the extensive traditional health care system. Within a government program, ayurvedic medicines are distributed at the rural health units and other facilities. Ayurvedic drugs were made part of the program because they are less costly than western medicines, and are manufactured in Nepal. The traditional drugs are well accepted by the population since they have been in use for hundreds of years. However, this practice does not seem to have had a major impact on the general shortage of medicines, a problem that has plagued the project.

#### IMPLEMENTATION EXPERIENCE

Notwithstanding various difficulties, significant progress has been made toward establishing an integrated delivery system over the past four years. Although behind in the number of active health posts and well behind in the actual integration process, the system is providing services across the board, from family planning to malaria surveillance, in at least 23 districts. District health offices are in place in an additional 24 districts. The delivery system is only partially installed, and services provided are of mixed quality. Still, a system on which to build is in place.

Two hundred ninety-eight fully staffed integrated health clinics have been established and 1-600 paramedical personnel have been trained in basic preventive and curative health care. Three pilot projects have been initiated to train volunteer village health workers and to test models of community participation in

health. The MOH Planning Cell designed a comprehensive survey of the effectiveness of all MOH programs. The first annual Country Health Profile, part of the MOH country evaluation, has been completed, an index system data bank for the Planning Cell has been implemented, a supervisor's manual for field inspections prepared, a control and monitoring capability for the Integrated Community Health Division created, and a training-of-trainers workshop held for Training Cell personnel in FY 1978.

Many of the problems and delays that the project has encountered are common to all development efforts in Nepal (and in most developing countries) and are not peculiar to this project. These include:

- a shortage of trained personnel, particularly in management and administration;
- the newness of government services;
- limited government funds;
- short - and long-distance transportation problems (most transportation is on foot);
- certain cultural beliefs, e.g., the role of women and the value of high fertility;
- high inflation and a serious shortage of construction materials;
- delayed funds; because of government politics, the Finance Minister and other ministers frequently delay releasing appropriate funds for many months.

Among factors that have facilitated the considerable progress of the ICHS Project are:

- the contributions of many external donors and their relatively smooth coordination by the Government;
- the Government policy supporting health services integration and primary health care expansion, coupled with the realistic recognition that rapid changes cannot be expected, due to organizational and other obstacles;
- relative bureaucratic stability.

The ICHS Project has faced many problems. These include the following:

1. Institutional Resistance: Vertical organizations have resisted integration. There are several reasons for this. Most projects, particularly the malaria and FP/MCH projects, have far larger staffs and budgets, and are better managed and organized than the BHS system. Vertical program officials fear that integration will reduce their ability to eradicate or control their target problems. They also want to protect their bureaucratic and political turf. Some USAID officials have shared in the reluctance to push integration of services.

The BHS system has been slow to obtain sufficient manpower, office space, and other program resources; these remain deficient. In contrast to the vertical programs, which are development budget programs that enjoy significant autonomy in controlling personnel, supplies, and supervision and management systems, the ICHP is a regular budget project. Thus the project has little autonomy and must rely on other government units for managing its budget, supplies, and personnel.

2. Personnel: Despite notable progress, the BHS system continues to suffer from a shortage of trained managers, logistics experts, management information system personnel, etc. According to the 1980 evaluation, the number and training of project staff "remain woefully inadequate for the task at hand."

The dropout rate among paramedical health workers staffing health facilities is disturbingly high. This continues an earlier trend among health program personnel to drop out of programs because of low salaries, posting and transfer difficulties, and lack of opportunities for advancement.

3. Technical Assistance: Because of a delay in recruiting and fielding two critical contract personnel (a paramedical training specialist and a management/planning specialist), the project quickly fell one year behind schedule. It has remained substantially behind schedule for reaching many targets.

4. Cultural Problems: The project must overcome the social barriers separating the rural population from modern, medically trained practitioners and their institutions. Health workers, who are almost invariably upper class and caste individuals from urban areas, find it difficult to work with villagers, who are often from lower class ethnic groups. Also, the project has made no serious effort to work with the various traditional health workers found in all villages.

In conclusion, despite progress in integrating and expanding a national PHC system, in the quantity and quality of project personnel, and in management and planning capabilities, much work remains before anything resembling a smoothly functioning, effective basic health care system is established in Nepal. Nonetheless, as the 1980 project evaluators pointed out, HMG and the ICHS

Project have been moving in positive directions. The problems and delays might be expected, given conditions in Nepal.

Although USAID's ICHS Project will terminate soon, it will be followed-up and expanded in the Integrated Rural Health/ Family Planning Project (367-0135).

### CURRENT PROJECT STATUS

<u>OUTPUTS</u>	<u>STATUS</u>
1. BHS management and control systems developed:	1. Clear progress has been made though much improvement is required (see items below).
a. Health posts established.	a. 298 fully integrated health posts have been established; the project has 533 total posts, or 142 short of the target of 675. By the end of 1979, 48 District Health Offices had been established (for 74 districts); 6 are fully integrated (all services), 17 are at the intermediate stage (including family planning), and 25 at the primary stage.
b. Supervisory functions developed.	b. For some time, there has been a critical lack of funds for staff per diem for rural areas; per diems are extremely low and payments may be delayed several months to several years. A supervisor's manual for field inspections has been prepared. The general lack of transportation hinders the ability of District Health Officers to supervise health posts; supervision remains inadequate.
c. Management health information system developed.	c. A control and monitoring capability has been fairly well established; the number of required forms has been greatly reduced, though new ones are not universally used.



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| <p>d. Logistics and supply systems developed.</p>       | <p>d. There is a general shortage of supplies and medicines; substantial logistical difficulties hinder delivery to the field. Many health posts receive only a three-month quota of supplies and medicines but are expected to make them last one year. In the view of the 1980 project evaluators, "this lack of medicines and supplies is a major factor contributing to the low esteem in which villagers hold the health service and health service personnel..." Future AID support should remedy this problem. Logistics responsibility remains outside the ICHP and rests with other divisions of the Department of Health Services. Many improvements could be made.</p> |
| <p>e. HMG budget system reorganized.</p>                | <p>e. The main budget responsibilities rest with other divisions of the Department of Health Services.</p>  |
| <p>f. HMG personnel system reorganized.</p>             | <p>f. As of February 1980, the ICHP central staff had been increased to 40 through deputation from other organizations (largely FP/MCH), but the number remains inadequate.</p>   |
| <p>g. MOH Planning Cell augmented and trained.</p>      | <p>g. Substantial success in reaching this goal has been made. The Planning Cell has designed a comprehensive survey of MOH program effectiveness, begun annual Country Health Profiles, and installed an index system data bank.</p>   |
| <p>2. Training of health workers to meet BHS needs:</p> | <p>2. Substantial progress has been made, but much work must be done. By the end of 1979, approximately 1,600 paramedical personnel had been trained.</p>   |

- a. Inservice training provided to meet needs.
- a. A training-of-trainers workshop was held in FY 1979 for the Training Cell; in 1978-1979, 169 village health workers, 77 auxiliary nurse midwives, 34 auxiliary health workers, and 61 health post chiefs received 306 weeks of inservice training.
- b. Institute of Medicine created to meet needs.
- b. A decision was made before the project was implemented that USAID would not take major responsibility for this activity.

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Grant-Swezy debriefing, May, 1980

Interview:

Laurie Mailloux, Ph.D., Anthropologist, USAID/Nepal, June 17, 1980.

Summer 1981

PAKISTAN

IDENTIFICATION

Project Name and Number: Basic Health Services Project, Number 391-0415

Location: Nationwide (4 provinces)

Project Dates: FY 1977 - April 30, 1981

Funding Level and Sources: USAID/Pakistan: \$1.5 million (grant)  
\$7 million (loan)  
Government of Pakistan: \$26.4 million  
WHO: \$ 480,000

Responsible Offices: Health Officer, USAID/Pakistan  
Bureau for Asia; Office of Technical Resources; Population, Health and Nutrition Division; AID/Washington

Contractor: MEDEX, University of Hawaii

COUNTRY STATISTICS

Total Population: 86.5 million

Rural Population: 72% Infant Mortality Rate: 142

Population Growth Rate: 2.8% Life Expectancy at Birth: 52

GNP Per Capita: \$230 Adult Literacy Rate: 21%

SYNOPSIS

The Basic Health Services Project assisted the Government of Pakistan in expanding its rural health system of Rural Health Centers and Basic Health Units. Mid-level and community-level health workers trained using a MEDEX model were to staff new physical facilities. The development of a management support system was to complement the training activities and ongoing delivery system expansion. Although a start was made toward achieving these objectives, AID assistance was to be terminated in April 1981 before many of the original objectives could be achieved.

## BACKGROUND

Today Pakistan faces the same health problems that existed more than 30 years ago, when the country became independent. Infectious and communicable diseases are prevalent, the fertility rate is high, malnutrition is widespread, and environmental sanitation is deficient. The population continues to grow larger and younger. The wide variety of diseases (e.g., intestinal parasites, goiter, dysentery, TB, malaria, polio, and tetanus) afflicting the population have their root causes in Pakistan's physical environment and socioeconomic status. It is estimated that only 15 percent of the rural population is covered by existing allopathic health services.

The quality and quantity of health services delivered in Pakistan vary widely from region to region. Historically, the health system has served urban rather than rural needs, has placed greater emphasis on training doctors rather than physician extenders, and has focused on curative services rather than preventive services and community health programs. Government programs to treat and prevent infectious and communicable diseases have, with the exception of the malaria spray program, reached only a small portion of the population. The health delivery system has been administered by a limited number of inadequately trained health workers and managers. It needs expansion and support.

In recognizing these health sector problems, the Government of Pakistan's Fifth Five-Year Plan (1978-1983) formulated a new health delivery strategy. The strategy aims to balance primary health care delivery in urban and rural areas and to extend PHC coverage to 50 percent of the rural population by 1983.

## PROJECT DESCRIPTION

The Basic Health Services Project follows the rural health strategy outlined in the Government's Fifth Five-Year Plan. The project was originally designed to be carried out in two phases, and to continue for a total of about eight years. The first phase was to lay the groundwork for the delivery of basic health services to the rural population, and Phase II was to see the delivery system's rapid expansion. However, because of delays and disagreements between AID and the Government of Pakistan, the project was curtailed. Phase II was omitted and the original Phase I became the entire project.

The project was designed to strengthen curative and preventive services through a three-tiered system that would greatly increase the accessibility, outreach, and quality of rural health care at reasonable cost. The upper tier, the Rural Health Center staffed by physicians and auxiliary personnel, was to act as the referral point for patients from a group of satellite Basic Health Units, staffed by medical technicians. The broadly based

lower tier rests on the associated villages, each with two community health workers. This combination of facilities has become known as an Integrated Rural Health Complex. Given the magnitude of the problems and the health manpower configuration, the GOP has made the decision to upgrade skills of existing health workers, and train mid-level and community-level health workers. The objectives --increased emphasis on rural health, less sophisticated facilities, use of physician extenders, and preventive versus curative care—are consistent with AID's priorities in the health field.

Three major activities are planned:

- Expansion of the rural health infrastructure;
- Initiation of health worker training programs;  
and,
- Development of a management support system.

#### Expansion of the Rural Health System.

The Integrated Rural Health Complex (IRHC), the functional unit responsible for delivering health services, is composed of a Rural Health Center which is surrounded by 5-10 Basic Health Units; the complex serves 50,000-100,000 persons, depending on population density. The Rural Health Center is the focal point for the management of a geographic catchment area of 150-250 square miles. It is to be staffed by a male doctor, a female doctor, two mid-level supervisory health workers, and two mid-level workers who deliver health care. In addition, four other mid-level workers (MLWs) based at the Health Center are to be deployed to the Health Units to provide coverage when regular staff are on leave or vacation, ill, or attending continuing education classes. The Rural Health Center is planned to:

- provide primary care in the immediate area;
- serve as a referral center for BHUs in the catchment area;
- be a center for local planning and management of preventive/promotive health programs;
- provide technical and administrative support to all workers;
- be the first collection and collection point for systems data; and,
- be the first-line drug and equipment warehouse.

The Basic Health Unit (BHU) is the most peripheral unit of the rural primary health system. It will serve 5,000-10,000 persons and covers an area of 15-25 square miles. Each Basic Health Unit will be staffed with two mid-level workers who will:

- provide primary care in the area;
- serve as a referral point for community health workers (CHWs) from the villages;
- plan and supervise CHWs' curative and preventive activities; and,
- supply CHWs with drugs and equipment.

The CHW is to be responsible for delivering preventive and curative medical care to a village. Daily CHW activities are to include 80-90 minutes of curative work at the Health Unit, then visiting two houses to carry out the following preventive tasks:

- weighing all children 6 months to three years old;
- detecting pregnancies early and referring pregnant women to the Basic Health Unit;
- recording births and deaths;
- providing family planning services;
- giving immunizations;
- monitoring known TB cases; and,
- providing nutrition and family planning information.

The project paper states that the support of the CHW workers would be an undue strain of the Government of Pakistan (GOP's) non-development budget. Therefore, several options have been developed and will be field tested to determine the most feasible, easily administered method of community support for this type of worker. These include:

- capitation with the possible use of stamps to eliminate transfer of money at the village level;
- a revolving inventory scheme with initial medications being provided by the GOP and the worker selling these for a small profit;
- fee-for-service curative care and piece work payment from the government for preventive care;

- a totally volunteer system with medication and supplies provided by the government.

Health Worker Training: The training of medical technicians—the mid-level para-professionals essential to the three-tiered system—is the first priority of the project. To train the necessary manpower, the project has developed a curriculum, is training tutors, and has established 20 training schools. A modular, competency-based curriculum (derived from the MEDEX model) is being used to train both MLWs. The teaching manuals for CHWs are complete and ready for use.

Management Support Systems: The project goals are to strengthen and expand the management infrastructure by:

- creating a National Basic Health Services Cell to coordinate basic health services, manpower development, and system support;
- preparing manuals on health care management; and,
- increasing technical skills in planning and operations.

#### IMPLEMENTATION EXPERIENCE

The following chart lists the desired outputs and their status toward the end of the project, when it was evaluated in January - February 1981. The outputs originally designated in the project paper were modified in the loan agreement and then subsequently greatly curtailed with the amended loan agreement of September 1979. The amended outputs are summarized below:

#### CURRENT PROJECT STATUS

<u>OUTPUTS</u>	<u>STATUS</u>
1. A Pakistan-adapted competency based curriculum for medical technicians.	1. A set of six manuals of some 2,000 pages was produced in the first year of the project.
2. A Pakistan-adapted simplified competency-based curriculum for community health workers.	2. A manual in English is available for the use of medical technicians in the training of community health workers. In addition, a translation of the material into Urdu was completed.



3. A management manual for personnel, drugs and supplies procurement and distribution, health information systems and communication systems for rural health complexes.
4. Establishment of at least 12 schools in all provinces for the training of medical technicians.
5. The training of a total of 80 medical technicians by the end of the project.
5. Not less than 48 community health workers trained and in place. (1350 originally planned for in project paper)
7. A total of 329 Basic Health Units were to have been completed.
8. A total of 36 Rural Health Centers were to be completed, according to the project paper.
9. A reduced number (6) of Integrated Rural Health Complexes (Rural Health Centers and satellite Basic Health Units) were to be in operation.
10. A baseline survey was to have been completed "before month 18 of the project."
11. Training of supportive workers was to be completed.
3. A prototype management manual was recently completed. Adaptation remains to be done for local requirements.
4. A total of 20 schools were established throughout the country.
5. More than 600 students have entered training, of whom over 200 have completed the course. Inservice personnel had a 12-month course, whereas new students had an 18-month course.
6. Essentially no community health workers have been trained, although the need for this type of worker has been generally accepted.\*
7. Over 400 have been completed. Others are under construction. Because no medical technicians have been deployed as such, no Basic Health Unit can be said to be in full operation.
8. Of this number, 225 have been built. None are completely staffed and in full operation.
9. No Integrated Rural Health Complex is in operation. Some are approaching this point, but lack appropriate staff.
10. A limited health survey of six villages was completed at the end of three and one-half years of the project.
11. None of these supportive workers have been trained.

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\* Prior to 1979 CHWs had been trained in two experimental areas, the Northwest Frontier Province and the Punjab.

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| 12. Field operations manuals.   | 12. Other than the curriculum and management manuals noted above, none have been prepared. |
| 13. Operational research and development including national performance standards for medical technicians, determinants of medical care utilization and a cost analysis of primary care expenditures. | 13. None of these operational research documents have been prepared.                       |
| 14. Communications support in the form of posters (4,000), and pamphlets (100,000) on rural health as well as radio broadcasts on health were scheduled.  | 14. No posters, pamphlets or radio broadcasts were in evidence.                            |
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Source: 1981 Evaluation.

The Basic Health Services Project has experienced both successes and setbacks over the past three and one-half years. The project has succeeded in constructing over 600 health facilities; establishing training schools in each province; developing training manuals and curricula; and training a considerable number of mid-level health workers, although none have yet been deployed.

As can be seen from the above table a number of project components have fallen far behind schedule, or were never initiated. The community health worker, for example, the very foundation of the primary health care program, remains an unknown and untried entity in Pakistan, as none of these workers have yet been trained. Another project element, the baseline health survey, originally planned to serve as a means of measuring the impact of the project, was carried out in such a limited fashion as not to serve this function. The 1981 evaluation team identified a number of constraints which hindered project implementation:

1. Unrealistic objectives: The objectives set out in the project paper were more than could reasonably be reached in a three year period.
2. Lack of widespread commitment to project approach: Although high level Ministry of Health officials (both those in power under Bhutto and subsequently under Zia-ul-Haq) were supportive of the project, there was a good deal of resistance to the concept of community health workers. There was also much

resistance to the project at the provincial level. The provincial ministries were being asked to undertake construction of new buildings, training of new personnel, and other activities associated with the project without having shared in project planning or execution. The evaluation team also felt that the method by which funds were dispersed for these activities caused concern about how the provincial level was to finance the new activities.

3. Division of control over project: Giving the host country control over the project, particularly the external technical advisors, did not work out well. The contract provided that all the major decisions made by the Ministry of Health had to be approved by AID. This for all practical purposes, left the Ministry with nominal control only. This lack of clear role definitions made implementation difficult. As a result AID became the de facto ultimate authority, which weakened the arrangements of the contract and had unpleasant consequences. The Government felt outside the decisionmaking process.
4. Strained political relations: A number of external factors caused friction between the Ministry of Health, AID, and the team of technical advisors. First, about two years after the project began, the U.S. applied Section 669 of the Foreign Assistance Act (on nuclear non-proliferation), and greatly curtailed planned project activities and level of funding, with only limited consultation with the GOP. Secondly, when the U.S. Embassy was attacked in November of 1979, the technical advisors were evacuated. However, since their contract was with the government, which was not notified of their departure, the government was offended and felt they should not be charged with paying for the advisors during their absence. The three month interruption in the project caused by this incident not only caused ill will, but made it difficult for the project to regain momentum. The third external factor affecting the project was the change in government soon after the project agreement was signed. The Bhutto government was replaced by the administration of General Zia-ul-Haq, which meant that the federal and provincial officials with the project were replaced. Orienting the new officials required about six months.
5. Problems with technical advisors: The project encountered a number of difficulties with consultants which delayed activities and diverted considerable energies to resolving personnel problems. There were problems with the consultants' contract because it did not provide a post differential. There were difficulties replacing advisors who left, and in recruiting individuals to fill the management post. There were also personality problems between the advisors and the ministry personnel.

6. Prefabricated Project Design: The 1981 evaluation team seemed to feel that the MEDEX program, as applied to rural Pakistan, might not be entirely appropriate. While the evaluation notes that the training manuals were modified, other elements of the basic design were not adapted sufficiently to the geographical, social, and cultural conditions of Pakistan. Furthermore, the report notes a lack of willingness to adapt to existing circumstances, or to look for ways to modify the program to suit the local situation.

Facilities Construction: Target outputs of basic health units and regional health centers have been exceeded. There has been an ongoing construction program in each province for several years, therefore many of the structures existed before the project began and were simply upgraded or removed. While over 400 Basic Health Units, and 225 Rural Health Centers have been completed, most are not fully operational, as the technicians to staff them have not yet been deployed. The first class of mid-level workers graduated in July 1980. The 1981 evaluation team notes that there must be greater coordination between the number of buildings and the posts created for health staff, if the buildings are not to be idle.

Management Support: Despite a strong effort in this area there was not enough time to get recommendations approved or put into effect. Recommendations covered the following areas: personnel, drugs, supplies, procurement and distribution, health information systems, operational planning and communications for the Integrate Rural Health Complexes. Recommendations, however, were discussed in a workshop attended by federal and provincial level health and planning officials in September 1980.

Slow progress in the area of developing management support appear to be related to problems in recruiting technical advisors in this field, which considerably delayed activities in this project area. Two factors contributed to this situation. As a project participant, WHO agreed to provide a management specialist within the first six months of the project. WHO was unable to fill this position, and left after only 1 year. MEDEX staff then suggested that they be allowed to provide the management advisor, and eventually USAID, MEDEX and the GOP agreed to amend the MEDEX contract to allow for the recruitment of a management advisor. Once this decision was made, however, there were difficulties finding a person acceptable to all the parties concerned. The advisor, therefore, did not arrive until December 1979, almost two and a half years after the project began. Furthermore, there were difficulties with the other key management advisory post. The project director reported in his quarterly reports that the host country administrator designated to head the Operations Research and Development effort did not wish to be assigned to the post. The administrator was on leave and unavailable much of the time.

MEDEX staff recommended that the position be filled by a person more willing to serve, but their suggestion was ignored. The two management positions were crucial because they provided leadership for management development, an aspect of the project that suffered because the positions remained "unfilled" for much of the project's life. Because of this, continued technical assistance in this area has been recommended for any follow-on project.

Training of Mid-Level Health Workers: The training of medical technicians has progressed well, although from the 1981 evaluation it appears that none of these workers have been deployed. To date 600 students have begun training, and 200 have completed the course.

Though each of the country's four provinces treats the project differently, it appears that all intend to continue it after AID withdraws—at least the utilization of paraprofessionals to extend health services to the rural areas. In the Northwest Frontier Province (NWFP), 7 schools for training medical technicians have been started, and they intend to continue the entire project as planned. The Punjab, with six schools, views the project as a demonstration one; a decision to expand the project will be made at a later date. The Sind takes a similar view. It has also changed the training units, establishing one or two separate facilities for women. Baluchistan has two such schools.

The problem of recruiting women remains; only in the Punjab has real progress been made in recruiting the number required. The other three provinces, which are setting up separate training units for women MLWs, may eventually reach the quota. The evaluation notes that as the Basic Health Services Project evolved, the health policy of the government clearly turned toward the development of a rural health care system using trained medical technicians for primary health care. This compares to the traditional budgetary and program approach which has been to favor the development of medical colleges (now 15), and large hospital complexes in the cities.

Community Health Workers: Although the teaching manuals are completed, there is not yet an active program to recruit and train CHWs. This is expected to begin once the medical technicians are in the field. So far the health delivery structure has been built from the top down, and the community-level supporting tier has not been added. According to the initial loan agreement, there were to be 1,350 CHWs in the field when the project terminated. This number, however, was subsequently reduced to 48 by the amended loan agreement.

The 1981 evaluation implies that the concept of CHWs is not certain to be carried out by the program. For while there is support for the concept at high levels of bureaucracy, physicians at the level of the Rural Health Centers are not at all certain as to the role of these workers. It is also not clear whether the

medical technicians sense some competition with the village workers, whom they are supposed to train. The evaluation notes that if this program element is not implemented, the project will either collapse or become simply another scheme for training paraprofessionals, not unlike the plans which have been repeatedly tried in Pakistan since 1946.

Project Continuation: AID assistance has been extended to April 30, 1981. The Government of Pakistan would like to initiate the second phase of the project and is contacting several donors who may be interested in providing funds to continue the effort. The 1981 evaluation team recommended that USAID fund a follow-on project directed toward: (1) making a number of Integrated Rural Health Complexes fully operational, and (2) fully staffing and making operational the existing Basic Health Units. Without this assistance the evaluation indicates the program will not develop a originally planned. Rather it is likely to falter and become simply another not-so-successful scheme for middle-level health workers.

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**PHILIPPINES**

**IDENTIFICATION**

Project Name and Number: Bicol Integrated Health, Nutrition and Population Project, Number 492-0319

Location: 400 villages in the provinces of Camarines Sur and Albay, on Luzon Island.

Project Dates: FY 1979 - FY 1985

Funding Level and Sources: USAID: \$2.5 million (loan)  
Philippines: \$2.9 million (central government, provincial and local sources)

Responsible Offices: Office of Health, Population, and Nutrition, USAID/Philippines  
Bureau for Asia; Office of Technical Resources; Population, Health and Nutrition Division; AID/Washington

Contractor: None

Implementing Agencies: Regional Health Office, Ministry of Health

**COUNTRY STATISTICS**

Total Population: 47.7 million

Rural Population: 64% Infant Mortality Rate: 80  
Population Growth Rate: 2.4% Life Expectancy at Birth: 60  
GNP Per Capita: \$510 Adult Literacy Rate: 87%

**SYNOPSIS**

The Bicol Project trains and deploys barangay (village) health workers, sets up village drugstores, subsidizes household water supply and sanitation system construction, and rebuilds and supplies some health posts. As of January, 1981, the first



batch of Barangay Health Aides (BHAs) will have completed training and be deployed in their respective barangays.

### BACKGROUND

The Government of the Philippines (GOP) Bicol River Basin Development Program was established in 1973 to focus development resources on a specific geographic area employing an integrated area development approach. The Bicol River Basin Coordinating Committee identified health services, water, and environmental sanitation as major development priorities and pledged support for a concerted effort to provide basic and integrated health services. AID supports several development projects in this region.

### PROJECT DESCRIPTION

The goal of the Bicol Health Project is to improve the health status of the residents of 400 barangays in two provinces of Luzon Island by controlling communicable diseases, maintaining population growth at a desirable level, increasing self-reliance for health and services, and improving sanitation. A set of socioeconomic indicators was used to identify communities of greatest need; 400 rural barangays were selected for the project.

The recruitment, training, equipping, and deployment of 400 BHAs are central features of the project. The BHAs will receive five weeks of formal training and three weeks of supervised field experience. They will also attend one-week refresher courses every six months. BHAs, who are recommended by local barangay councils and appointed by the MOH, are provincial employees paid U.S. \$50 per month.

BHAs are required to have at least a 6th grade education or its equivalent. According to project planning documents, BHAs will have a heavy load of health, nutrition, and family planning tasks, including promotion of hygiene and sanitation. BHAs will:

- Record barangay births and deaths and report them to the health unit.
- Conduct a census and prepare maps illustrating important health and sanitation information.
- Give instruction in infant and child nutrition, including the importance of breastfeeding, and refer children suffering from third degree malnutrition.
- Participate with other workers in the population education and family planning programs of the barangay.

- Promote in the barangays disease control campaigns of the rural health unit, including immunizations.
- Promote cleanliness, safe water, and proper waste disposal.

BHAs will help set up village drugstores, using start-up capital (approximately U.S. \$160 for each of 400 participating barangays) to make appropriate non-prescription medicines available at the lowest possible price. A subsidy of U.S. \$10 will be provided to construct as many as 32,000 water-sealed toilets (the labor will be supplied by recipients). The Bicol Health Project intends to build or rebuild some barangay health stations and to purchase microscopy equipment and supplies that the rural health unit needs to detect tuberculosis and intestinal parasites.

#### IMPLEMENTATION EXPERIENCE

The Bicol Health, Nutrition and Population Project, one of a series of resource development projects for the Bicol region at the southern tip of Luzon Island, has been three and a half years in the planning. The loan agreement for the project was approved in August 1979; the first key activity, the selection and training of BHAs, began in November 1980. Other project outputs depend, in part, on BHA deployment; these too, are behind schedule. Failure to include the Government's contribution to the project in the Ministry of Health's current budget is a factor in the delay of project start-up.

Another factor in the implementation problems is the Government's reported belief that Bicol project cannot be replicated countrywide because of the cost of using paid community health workers. The counter argument is that local communities are now expending considerable resources on traditional healers and other care. The challenge of the project (and of the Panay Unified Services for Health Project, also AID-funded) is to determine whether trained workers who provide access to services for villagers will be accepted and, in the long run, supported at the local level in the same way that traditional healers and private health personnel are supported.

There are several thousand trained midwives in the Bicol region who are not working; many are eager to work as BHAs. Their qualifications exceed the minimum educational requirement (6th grade or equivalent) for BHAs. It is planned that a large number of these women will be chosen to be trained and employed as BHAs.

According to the project paper, the Bicol Health Project is also expected to benefit 400,000 people living in the 400

villages selected for the project. Among other project goals are the reduction by 36 percent of infant mortality, the reduction by 33 percent of the incidence of gastroenteritis and tuberculosis, and the reduction by 40 percent of the incidence of malnutrition among children under age 6. These ambitious goals may not be realistic, one mission official admitted. They are worthy goals toward which to strive, but the project should not be judged a failure if they are not attained.

The following outputs are planned for the Bicol Health Project:

- 400 BHAs recruited and trained.
- 400 first aid drug and nutrition kits distributed.
- Permanent training centers organized and used.
- Environmental sanitation survey of 400 barangays completed.
- 1,560 small barangay water facilities constructed.
- 400 village drugstores built.
- 1,063 households assisted in improving water supplies.
- 32,000 household water-sealed laterines constructed.
- Drainage ditches constructed in priority areas.
- Seven rural health centers renovated.
- Nine barangay health stations constructed.
- Provincial laboratories upgraded.

The initiation and completion of many of these activities will depend on the deployment of BHAs who must organize community campaigns, and the assistance of other government and quasi-government (non-project) personnel, such as family planning specialists, barangay nutrition experts, and well drillers of the Philippine Department of Public Works. Since all the latter personnel have their own priorities, which may or may not mesh with those of the Bicol Health Project, achieving project outputs may be difficult.

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#### Interviews:

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Mr. Don Wadley, Rural Development Officer, USAID/Manila, May 21,  
1980. (Mr. Wadley was on home leave in Washington.)

Summer 1980

**PHILIPPINES**

**IDENTIFICATION**

Project Name and Number: Panay Unified Services for Health (PUSH), Project Number 492-0312

Location: 600 villages in four provinces (Iloilo, Antique, Aklan, and Capiz) on Panay Island, a large island in the Central Philippines.

Project Dates: FY 1978 - FY 1982

Funding Level and Sources: USAID: \$5.4 million loan  
\$0.3 million grant  
Philippines: \$2.9 million  
Communities: \$1.0 million

Responsible Offices: Office of Population, Health and Nutrition, USAID/Philippines  
Bureau for Asia; Office of Technical Resources; Population, Health and Nutrition Division; AID/Washington

Implementing Agencies: Development Academy of the National Economic and Development Authority  
Regional Development Council of Region VI

**COUNTRY STATISTICS**

Total Population: 47.7 million

Rural Population: 64% Infant Mortality Rate: 80  
Population Growth Rate: 2.4% Life Expectancy at Birth: 60  
GNP Per Capita: \$510 Adult Literacy Rate: 87%

## SYNOPSIS

The Panay Unified Services for Health (PUSH) Project trains and deploys health workers, sets up village drugstores, supports simple water supply systems and toilet construction, and supplies drugs and vaccines to rural health centers. Four groups of health workers (150 in all) have been trained and deployed in the PUSH Project since September 1979.

## BACKGROUND

Physicians in the Philippines do not find rural practice attractive, and the rural population has little access to modern medical care. The rural population—seventy percent of the total on Panay Island—receives only a limited share of the total Philippine Government's investments in health services.

Malnutrition is the major health problem on Panay Island: 85% of all children aged 0-6 are malnourished. The population also suffers from high prevalences of tuberculosis, gastroenteritis, and parasitism. Almost all of these causes of morbidity can be prevented by simple public health measures that physician extenders or health auxiliaries can provide. Control of most disease problems in Panay does not require a high level of technology, either in terms of manpower or facilities.

## PROJECT DESCRIPTION

The goal of the PUSH Project is to improve the health status of residents of 600 villages (barangays) in four provinces on Panay Island. The barangays are selected according to need using a set of socioeconomic indicators.

To accomplish this goal, the project is establishing a barangay-based system to provide basic preventive, educative, and health promotional services and an essential environmental sanitation infrastructure. The key to project success will be the effectiveness of 600 barangay health workers (BHWs) who are being recruited, trained, equipped, and deployed.

The procedures for selecting BHWs begin when a community development worker comes to a village to help organize a barangay health committee. The committee then nominates, the mayor endorses, and the Provincial Government eventually appoints a BHW, who may be either male or female. Originally, the candidates had to be between the ages of 18 and 45 and have at least six years of formal education. During the selection of the second batch of BHWs, however, the age qualification was raised to 21 and the education requirement was changed to graduation from high school. As in the Bicol project, BHWs in PUSH are full-time, salaried, Provincial Government employees. They receive approximately U.S. \$50 a month, an amount comparable to the pay of the lowest level civil servants.

The BHWS are asked to work in seven general areas, emphasizing those of most concern in the locality where (s)he works:

1. Promote environmental sanitation with the technical assistance of provincial government sanitation engineers. BHWS will monitor water quality and promote the safe handling and use of water. They will also campaign for sanitary waste disposal.
2. Provide information on different contraceptives and resupply villagers who are using family planning commodities. BHWS will refer new acceptors to appropriate agencies.
3. Weigh and keep growth records on barangay children under six. BHWS will promote breastfeeding and provide information on locally available nutritious foods.
4. Assist with immunization campaigns and help the rural health units during their other disease control campaigns.
5. Screen villagers and refer those with serious illnesses. BHWS will follow up patients undergoing prolonged treatments.
6. Map serious health risks in the barangay and record and report vital events such as births and deaths.
7. Assist the community in organizing efforts to combat existing barangay health problems.

To prepare for their responsibilities, BHWS receive six weeks of basic training: four weeks of theory and two weeks of field preceptorship. The project design also includes a two week refresher course and further training every six months after BHWS complete their basic training course. Training must accommodate the fact that several languages are spoken on the island.

The BHW trainers undergo six days of training at the Regional Training Center. Among the 30-35 people who become trainers are provincial health officers, sanitary engineers, nurse supervisors, health educators, and development staff members. Chief sanitary inspectors and midwives also serve as trainers.

Other PUSH project goals revolve around environmental sanitation. Funds have been allocated for the construction of wells and water sealed toilets as well as the upgrading of four provincial health laboratories.

The development of village drugstores (Botica sa Barangay) is another important aspect of the project. It is planned that village drugstores will be owned, operated, and managed by each barangay. The project will provide for the initial capitalization of \$100 worth of drug supplies. A small mark-up may be charged on the

purchased cost of a drug to cover operational expenses and to generate funds to finance other community health projects.

A unique feature of PUSH is its organizational set-up. The implementation of the project is coordinated by the Regional Development Council VI (RDC VI) whose chairman is also the Project Director. The participating provincial municipal governments coordinate implementation activities at the subregional level with the Ministry of Health, which assumes responsibility for all technical health aspects of the project.

According to one USAID official familiar with the project, a conscious effort was made to enlist the support of political leaders on Panay Island for the PUSH Project. The driving force behind the strong commitment manifested by Panay's political leadership is their desire to prove that a regional entity can, on its own, plan and manage a development project. The USAID official strongly recommended that outside teams visit the Panay project because it is an example of a project in which regional officials take a proprietary interest.

#### IMPLEMENTATION EXPERIENCE

The PUSH project appears to be progressing well, according to the 1980 evaluation.

#### CURRENT PROJECT STATUS

<u>OUTPUTS</u>	<u>STATUS</u>
1. 600 barangay health workers trained and deployed: year 1, 50; year 2, 100; year 3, 150; year 4, 150; year 5, 150.	1. 100 BHWs trained and deployed as of June 1980. Others now in training.
2. Family planning, nutrition, and health services facilitated by BHWs.	2. Community health survey in each village completed.
3. 1,200 shallow driven wells constructed and functioning.	3. 372 shallow driven wells proposed; 83 completed.
4. 280 deep drilled wells constructed and functioning.	4. 8 deep driven wells proposed; 14 completed.
5. 5,400 shallow dug wells improved.	5. 5 open dug wells proposed; 1 completed.
6. 40,000 water-sealed toilets constructed.	6. 1,342 completed.



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|---|---------------------|
| 7. Adequate household water made available to approximately 44,960 households.                      | 7. No information.  |
| 8. 10,000 second and third degree malnutrition cases rehabilitated.                                 | 8. No information.  |
| 9. Four provincial laboratories equipped to conduct water analysis, sputum, and other examinations. | 9. No information.  |
| 10. 600 barangay drugstores organized, supplied and functioning.                                    | 10. No information. |

The November, 1980 project evaluation reported the following status of the water and sanitation projects:

	<u>No. of Projects</u>	<u>Projects completed</u>	<u>Projects Ongoing</u>
Shallow dug wells	118	95	23
Open dug wells	63	5	58
Drilled deep wells	25	11	14
Spring development projects	14	7	7
Water sealed toilets	2,150	1,661	489

One hundred and fifty BHWs have been trained and deployed. The basic curriculum and training for the BHWs seems appropriate for their expected functions. Nonetheless, a 1980 project evaluation recommends that some alterations be made so that the training is oriented more to problem solving and real life situations than to theoretical situations. In addition, there is a need to prepare the BHWs emotionally and psychologically for the difficulties they encounter upon returning to their respective barangays.

BHWs are eager for additional training to upgrade their present skills in first aid, dispensing medicine, and other areas. After more than a year since the first basic training course, however, no re-training sessions have been held.

BHWs rate the majority of trainers as good, although feedback indicates a need for some of the resource persons to improve their communication skills. A follow-up evaluation after the trainees have been fielded has not been carried out yet, so it is difficult to determine the success of the training program. Information is available, however, on the following BHW activities:

Nutrition: The standard practice is for mothers to bring their children to the BHW station for weighing. Since the distance is frequently quite far, BHWs have opted for home visits to maintain regular monthly or quarterly participation. Records are kept by BHWs and updated after every weighing; children with second and third degree malnutrition are identified and are then referred to the next level of health care for feeding and rehabilitation.

There has been some difficulty in maintaining participation in weighing programs, mainly because of the inconsistent availability of food which is supposed to be provided by government-sponsored programs. To combat this problem, some BHWs have initiated community gardening and backyard vegetable projects to complement the current diet if not to serve as the main sources of nutritious food.

Immunization campaigns: BHWs are performing their expected functions in this area to a considerable extent. One problem is their incomplete knowledge of when to administer what type of immunization for a particular age group. BHWs also need more training to recognize the signs and symptoms of patients suffering from TB, pertussis and tetanus.

Supervision: Most Regional Health Midwives visit their respective PUSH target barangays at least twice a month. Most BHWs feel that they are receiving adequate supervision.

Drugstores: Apparently the village drugstores planned have not yet been established.

Medical care: All BHWs interviewed have referred patients to higher levels. In spite of this referral system, however, many patients go straight to the rural health unit. It is worth noting that some villagers view BHWs largely as education/preventive agents, not as providers of medical care.

Vital records/reports: Reports sent in by BHWs appear to be informational only. They are not analyzed as a means of planning action programs or adjusting priorities. If feedback is provided, it is irregular and unscheduled. In addition there is a lack of printed forms for the BHWs to fill out.

Family planning: There have been minimal accomplishments in this areas. Home visits average 0-4/month. Limited materials are on hand. Referrals vary between 2-4/month, and the combined number of users of pills and condoms supplied is less than 20/barangay. The key to providing better service in family planning seems to be more training.

Community mobilization/participation: There is considerable variation in the level of community support. Discussions and decisions concerning PUSH are made at barangay assemblies reportedly held between 2-12 times per year and attended by 30-600 residents, and barangay and

municipal officials. The presence of the latter two categories of people is vital to generating community support. At these meetings, the community decides on what kinds of sanitation projects would be most appropriate and also chooses sites for these projects.

BHWs do seem to make use of existing organizations and clubs within the barangays in the planning and implementation of PUSH project activities. Community support is shown by donated labor and locally available materials, and by participation in decision making. Difficulties have arisen with the degree and frequency of participation and support from residents during planting and harvesting time, however. Also, some residents who have contributed labor once are reluctant to do so again, especially when they are not direct beneficiaries, and when project sites are located far from major residential areas.

Environmental sanitation: Sanitation projects funded by the program seem to be regularly inspected by the BHWs. However, there is a problem with follow-up: since water is used for drinking purposes, it needs to be analyzed for potability. In the barangays visited during an evaluation study, most BHWs had not submitted water samples to the regional laboratory for analysis. This is important since the private contractors who lack experience with deep-well drilling may not have complied with specifications.

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### Interviews:

Dr. Gerald van de Vlugt, former Health Officer, USAID/Manila, May 23, 1980. (Dr. van de Vlugt was on home leave.)

Don Wadley, Rural Development Officer, USAID/Manila, May 21, 1980. (Mr. Wadley was on home leave in Washington.)

Summer, 1980

**THAILAND**

**IDENTIFICATION**

Project Name and Number:                   Lampang Health Development Project,  
  Number 931-0971

Location:                                    Lampang Province

Project Dates:                              FY 1974 - FY 1982

Funding Level and Sources:                USAID:                                   \$8.2 million  
(FY 1971 - FY 1979)                        Royal Thai Govern-  
  ment (RTG):                             \$400,055

Responsible Offices:                        Health Officer, USAID/Thailand  
  
  Bureau for Asia; Office of Techni-  
  cal Resources; Population, Health  
  and Nutrition Division; AID/Wash-  
  ington

Principal Contractor:                      School of Public Health, University  
  of Hawaii\*

Implementing Agency:                       Department of Health, Royal Thai  
  Government

**COUNTRY STATISTICS**

Total Population: 68%                    Infant Mortality Rate: 68

Population Growth Rate: 2.3%            Life Expectancy at Birth: 61

GNP Per Capita: \$490                     Adult Literacy Rate: 84%

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\* The role of the University of Hawaii, School of Public Health is to manage the provision of American-sponsored technical assistance to the project. The faculty and staff have worked with the Thai Ministry of Public Health to develop the implementation plans. Two senior staff members have been at Lampang since it was funded. They support the Thai project managers and coordinate University of Hawaii students and faculty who work on various aspects of the project.

## SYNOPSIS

The Lampang Primary Health Care Project is a health development model for Thailand implemented by the Ministry of Public Health (MOPH) and supported by the School of Public Health, University of Hawaii, under contract. The project is fully operational and features (1) a reorganization of the provincial health system, (2) use of physician substitutes called wachakorn and village health volunteers to provide health care, (3) an emphasis on child nutrition, and (4) a comparative evaluation of the project area and a nearby control area. The project began in 1975 and is scheduled for completion in 1983 following thorough evaluation. The Government has replicated many features of the project in the national health plan and its twenty province primary health care expansion project (Rural Health Care Expansion Project, 493-0291).

## BACKGROUND

Health leaders in Thailand have long recognized the need to strengthen the Government's health care delivery system and to extend basic health services to the majority of the predominantly rural population. In the 1960s, the rural population, which is increasing by 3 percent annually, suffered primarily from easily diagnosed and easily treated conditions—communicable and infectious diseases common in Southeast Asia, diseases of pregnancy and childbirth, malnutrition, gastrointestinal problems, skin infections, and accidents. Only about 25 percent of the rural population had convenient access to government health facilities, and even where government health facilities were available, they were not much used. Only 15 to 17 percent of the rural population sought health care from government facilities and personnel. Only 2 to 3 percent of the national budget was allocated for health services. The limited numbers of trained medical and health personnel tended to remain in Bangkok and other urban centers.

In the 1960s, the Ministry of Public Health implemented two key projects to strengthen the rural health services delivery system and to extend available, accessible, affordable, and acceptable basic health services to the rural population. The experience gained in these projects influenced the conceptualization and planning of the Lampang Project.

Lampang Province is located in the center of northern Thailand. Lampang's population is approximately 666,000 (1978). Population growth since 1970 has averaged 1.8 percent annually. The people are predominantly Buddhist and rural, the economy agricultural. The province comprises 12 districts, 75 sub-districts, and 538 villages. The provincial center, Lampang Town, has a population of 50,000.

Within the constraints of budget limitations and the lack of trained health manpower, health facilities, and other resources needed to implement and maintain a viable and effective health delivery system, project planners sought the most cost-effective ways to expand health services. They recognized that the cost of building an adequate number of facilities and of training enough physicians (even if they were willing to live and work in rural areas) would be prohibitive. Therefore, they decided to retrain existing categories of health workers (nurses, midwives and sanitarians) to provide a limited but relevant range of competent curative services. These workers would be known as "intermediate technical care providers" (or community health paraprofessionals—"wechakorn", which in Thai means medical healer). The limited number of available physicians could supervise the corps of wechakorn. Use of these workers would significantly extend clinical care services in sub-districts (population approximately 5,000). Because wechakorn would have limited capabilities, a patient referral system was planned.

The provision of integrated curative, disease prevention, and health promotion services (in particular, nutrition, family planning, and maternal and child health services) is more cost-effective than the provision of separate services. Integrated services are also more comprehensive, convenient, and acceptable to service clients. The project aims to integrate health services and to reorganize the health system infrastructure. Strengthening management practices and operating the health system using an informed decision-making process involving a streamlined health information system would improve performance and promote efficiency and effectiveness.

A central strategy follows the primary health care approach outlined by the World Health Organization. Under this approach, the mobilization of all available private sector and community resources vastly increases the coverage provided by coordinated government/private sector health care workers. Community organization and community participation in an expanded health system are essential. Wechakorn and other village health center staff supervise and guide village health volunteers. Wechakorn also are the first referral point for village volunteers.

Most rural deliveries are assisted by traditional birth attendants. Rather than attempt to change this pattern of behavior, the project planned to train traditional birth attendants to follow more sanitary practices and to recognize complications that require more sophisticated medical care.

#### PROJECT DESCRIPTION

The objective of the Lamphang Project is to use available resources to expand health care to at least two-thirds of the rural target population—women of child-bearing age and pre-school

children—during the five-year project. To reach this goal, the Lampang Project adopted several innovative strategies:

- Training and deployment of wechakorn paraprofessionals;
- Development of community health volunteers;
- Community and private sector involvement and cooperation; and
- Reorganization and integration of provincial health service infrastructure.

Nurses, midwives, sanitarians, and nurses aides who have had several years of field experience have been trained as wechakorn. More than half of them are women. To become physician extenders, they complete a year of training which is based on the MEDEX approach. The curriculum consists of various training modules on areas for which wechakorn are responsible: supervision of village health volunteers, provision of comprehensive maternal and child health services, and supervision of nutrition surveillance. Various clinical skills and laboratory techniques are taught as well. Once they complete their training and begin work, wechakorn have an incentive in the form of an award that is given to the most active and best performing worker.

The Lampang Project has trained three distinct but interrelated categories of community health volunteers:

1. Health post volunteers are literate men and women, frequently farmers or shopkeepers. During their two weeks of training at the district hospital, they are taught by government personnel and project training staff to provide curative and family planning services and to make referrals. After they are trained, HPVs set up practice in their own homes. They obtain drugs at a 20% discount and sell them at a small profit, usually \$5-10 a month. An additional incentive is free medical care at government health facilities for HPVs and their families.

2. Health communicators are chosen by their village health committees. One is selected for every 10-15 households in each village. HCs take a two day course at a local school or temple on such topics as nutrition, maternal and child health, family planning, and sanitation. They are then responsible for promoting the HPVs' activities. They help organize fellow villagers during health promotion programs and other local activities. Free medical care also is an incentive for HCs.

3. Traditional birth attendants are elderly, illiterate women who have worked for years as TBAs in their own villages. During a two week training course held at the midwifery school in Lampang, women who speak the local dialect give classes to 25 TBAs in areas such



as MCH/FP skills, detecting and referring cases of abnormal pregnancies, and advising mothers on good nutrition. Once a year, TBAs, who number one per village, are given a short refresher course. As is the case with HPVs and HCs, free medical care is an incentive for these women to continue their work.

The project plans to reorganize and integrate the provincial health infrastructure to better balance curative services offered at hospitals with preventive and promotive services provided by rural health facilities. A patient referral and transport system now links the health centers to district hospitals and to the provincial hospital. Continuing education and supervision of wechakorn and VHWS are incorporated into the organization.

Community and private sector involvement is considered the most important aspect of the project. It is to be achieved by promoting and supporting:

- Village health committees;
- Sub-district health committees;
- District-provincial coordinating committees;
- Commercial health organizations (pharmacists); and,
- Religious organizations.

The project is reviewed each year. District, provincial, and national government officials share the report on the evaluation team's findings with sponsors and staff, and with interested foreign organizations and private sector representatives. Religious groups, commercial health businesses, and private medical practitioners are represented.

The Lampang Project, which was originally designed as a pilot study to test the delivery of a low-cost health care system, is now approaching its final year. The question remains: How effective is the approach, and given present resource constraints, are the essential features of the project feasible and desirable in other parts of Thailand?

From the beginning, project planners recognized the need to assess the project's achievements and impact, and emphasized evaluation to determine how this new approach to rural health care delivery worked. They proposed making an evaluation to:

- Measure consumer accessibility to and acceptance of provincial health care services;

- Assess the performance of health personnel, and determine costs of operating and managing the health delivery system;
- Measure the impact of services on the health status of population (indicated by changes in baseline indicators); and,
- Assess the financial, social, and administrative feasibility of replicating nationwide the key features of the new health delivery system.

The study design involved three sequential experimental areas to which all project inputs are applied and two control areas, one in Lampang Province. In addition to pre- and post-project assessment, routine monitoring has been continuous and has enabled project managers to make decisions and adjustments without having to wait for the results of the final evaluation. Six special studies gather information that is fed to the planning and operational units and used by the Division of Research and Evaluation.

IMPLEMENTATION EXPERIENCE

CURRENT PROJECT STATUS

DEVELOP COMMUNITY HEALTH VOLUNTEERS

The following table summarizes project outputs as of 1980.

CURRENT PROJECT STATUS

<u>OUTPUTS</u>	<u>STATUS</u>
<u>DEVELOP COMMUNITY HEALTH VOLUNTEERS:</u>	
1. Train 672 health post volunteers.	901
2. Train 4,846 health communicators.	5,363
3. Train 342 traditional birth attendants.	352
4. Train 92 community health paraprofessionals.	96
<u>REORGANIZATION OF PROVINCIAL HEALTH INFRASTRUCTURE: All activities completed.</u>	
1. Establish Department of Community Health in provincial hospital.	
2. Organize mobile teams; supervisory visits to wechakorn.	

3. Organize referral service to and from rural health centers and hospitals.
4. Organize patient transport system.
5. Shift line of authority for district hospital from Department of Interior to MOPH.

COMMUNITY AND PRIVATE SECTOR INVOLVEMENT:

1. Village health committees:
  - a. organized. Yes
  - b. village health workers selected. Yes
  - c. role in planning and decision making established. No
  - d. meet regularly. No
2. Sub-district health committee organized.
3. District-provincial committee. Yes

EVALUATION: All activities in progress.

1. Measure consumer accessibility.
2. Measure acceptance of provincial health services.
3. Study performance and cost of health personnel-VHWs, VHCs, BHAs, wektakorn.
4. Study cost of health delivery system.
5. Compare health indicators to baseline.
6. Study of nutrition status of population.
7. Study replicability of key features on national basis:
  - a. financial.
  - b. social.
  - c. administrative.

The three major innovations in Thailand were the introduction of the wechakorn, the reorganization of the provincial health services delivery system, and the implementation of a sophisticated evaluation system.

The introduction of wechakorn was cause for much controversy among physicians, nurses, and other health workers. The Civil Service Commission has neglected to officially recognize these workers and, consequently, they have not received financial remuneration for their services. The residents of Lampang communities have, however, accepted them readily. The quality of these workers' medical care is now being assessed by the Chaing Mai Medical School. The idea of using paraphysicians (nurse-practitioners) was adopted by the Fourth National Five-Year Health Development Plan. (See AID Project 492-0291.)

The problem of inadequate supervision and guidance is a recurring one throughout the primary health care network. Wechakorn as well as village-level volunteers have requested extended supervision.

Some observers feel that the role of the village health committee could be expanded and that more local activities could be organized by those committees if more attention were paid to their training and technical guidance. Villages in Lampang have been saturated with government programs calling for local community participation in many areas of development. It is unclear, however, what effect these earlier efforts have had on the health care program's community participation efforts. Finally, in the opinion of one observer, programs such as Lampang, where women are a primary target group, should make more attempts to encourage the participation of women by working through informal leadership networks rather than through the traditional male leaders.

The reorganization of the provincial health service system and the integration of preventive, promotive, and curative services were likewise controversial. The creation of a Department of Community Health Services in the provincial hospital facilitated both reorganization and integration. The rate of patient referral from districts increased, and health promotion fostered increased use of remote health facilities. A mobile health service has been added. Physicians and senior wechakorn can now supervise rural wechakorn in the field and provide services (e.g., vasectomies, immunizations) requiring technological support.

With the sophisticated information system introduced by the project, monitoring project activities can now be documented. The project was extended for another two years so that its long-range impact on the health status of the Lampang population could be measured and its innovative features evaluated. By using comparisons of experimental districts with control districts, a study team

should be able to determine the effectiveness of preventive measures and the extent to which the population uses the health system. Nutrition studies documenting the impact of child-feeding on the health status of the target group should be especially valuable.

Preliminary evaluation data indicate that utilization of government health services, especially where wechakorn are deployed, has increased greatly, in contrast to the control area. In addition, coverage has increased substantially, and, consumer satisfaction is reported to be high. Home deliveries have decreased from 61% to 47%, and trained TBAs are attending more of the province's births. Family planning acceptance was high when the project began, but there has been a significant increase in the use of contraceptives among young married women over the course of the project. The birth rate has decreased.

After training, Health Post Volunteers often must wait until they are properly equipped, which holds up their initial activities and undermines morale. Nonetheless, HPVs have clearly contributed to distributing oral contraceptives, and they have consistently referred about 10% of their medical care contacts to other facilities. Later evaluations should more clearly indicate the effectiveness of the Lampang project in all areas.

Significant aspects of the project are being replicated in a nationwide program that is expanding primary health care services in 20 selected provinces (see following project summary.)

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**THAILAND**

**IDENTIFICATION**

Project Name and Number: Thailand Rural Health Care Expansion Project, Number 493-0291

Location: 20 selected rural provinces

Project Dates: FY 1979 - FY 1982

Funding Level: USAID: \$ 5.5 million (loan)  
and Sources: Others:\* \$35.5 million  
Royal Thai Government: \$20.6 million

Responsible Offices: Health Officer, USAID/Thailand  
  
Bureau for Asia; Office of Technical Resources; Population, Health and Nutrition Division; AID/Washington

Implementing Agency: Project Administration and Finance Unit, Ministry of Public Health

**COUNTRY STATISTICS**

Total Population: 47.3 million

Rural Population: 86%                      Infant Mortality Rate: 68

Population Growth Rate: 2.3%              Life Expectancy at Birth: 61

GNP Per Capita: \$490                      Adult Literacy Rate: 84%

**SYNOPSIS**

This ambitious project to provide primary health care (PHC) services to 18 million people in 20 of the most needy provinces in Thailand is well underway. The project has been able to build upon pre-existing programs and make use of a sizable manpower pool. Only two components are behind schedule: management training and research and evaluation.

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\* Including the World Bank and Governments of Australia, Canada, and Norway.

## BACKGROUND

The Kingdom of Thailand is a constitutional monarchy. Most Thais (over 80 percent) live in rural villages. Farming is the predominant occupation. More than 95 percent of the people practice Buddhism.

Thailand's health problems are common to many developing countries: rapid population growth, a relatively young population and a high dependency ratio; high infant and maternal mortality rates; a high accident rate; a high frequency of parasitic, vectorborne, and other infectious diseases, many of which are directly attributable to inadequate environmental sanitation; and various nutritional deficiencies.

The Fourth Five-Year Plan (1977-1981) places special emphasis on the provision of primary care to improve the health of the rural population. Several projects laid groundwork for the Rural Primary Health Care Extension Project which seeks to carry out that mandate.

- The National Family Planning Program, funded in part by AID and the Royal Thai Government (RTG), has provided services, equipment, drugs, training, and management since 1970.
- The AID-supported Lampang Primary Health Care Demonstration Project has been a model for training several categories of health workers, reorganizing the provincial health system, establishing a nutrition program, fostering community participation, and conducting evaluations. The University of Hawaii provides technical assistance.
- The Faculty of Public Health at Mahidol University (supported by WHO, the China Medical Board, and the RTG) has been training nurse practitioners and trainers of village health workers since 1973. The evaluation of nurse practitioners/VHWs and of the quality of primary health care in Thailand has been of prime interest to both faculty and students.
- The experiences of a variety of smaller primary health care demonstration projects, implemented by the Ministry of Public Health with the support of various donors, have also been useful. (See the Thailand report on PHC for the Alma Ata Conference).

The 20 province project does not propose to introduce innovations in primary health care, but seeks to implement nationwide the most successful elements of earlier demonstration projects.



## PROJECT DESCRIPTION

The Rural Primary Health Care Expansion Project (Primary Care Expansion Project), funded by a three-year \$5.5 million loan from USAID, is a discrete but integrated component of the larger multi-donor population project. The primary purpose of this sub-project is to make primary health care services more accessible to the rural population in 20 selected provinces. The project proposes to accomplish this goal by developing health manpower training programs for a variety of district and lower-level workers; improving the management and supervisory skills needed for an expanded rural primary care system; improving the health program evaluation and research capabilities of Ministry of Public Health (MOPH) central and provincial staffs; conducting short-term training programs for rural health manpower; providing long-term assistance in developing health planning, evaluation, and research capabilities in the MOPH; and funding specific evaluation and research activities to be conducted or coordinated by MOPH staff.

The major categories of personnel who will receive short-term basic or inservice training are:

- village health communicators and village health volunteers (basic training);
- primary care paramedicals, including nurse practitioners, local-level auxiliary midwives, junior sanitarians (inservice training) and assistant health workers (basic training);
- primary health care supervisors at district and provincial levels (inservice training); and,
- administrators and planners at district and provincial levels (inservice training).

The Health Planning Division (HPD) will be responsible for strengthening the evaluation and research capability of the MOPH. The HPD will coordinate planning, research, and evaluation activities throughout the MOPH; conduct and collaborate on operational and evaluative studies on primary health care delivery and training in the 20 provinces; and design appropriate management and supervisory training programs that will enable the various provincial and district health staff to participate more effectively in the expanded primary health care system.

Besides \$48 million the Royal Thai Government has borrowed from the World Bank, Australia, Norway, and USAID, it will contribute an additional \$20.6 million to the project. The USAID loan will be used primarily for training primary health care workers and supervisors, conducting research and providing

education; the other funds will be used to pay for construction and equipment.

IMPLEMENTATION EXPERIENCE

The following chart describes the project's status as of December, 1979.

TRAINING OF PHC WORKERS

OUTPUTS	STATUS
1. Nurse practitioners - 900	321
2. Auxiliary midwives - 2,250	1,055
3. Health assistants for midwifery centers - 740	567
4. Health assistants for family planning - 500	308
5. Village health volunteers - 7,892	4,678
6. Village health communicators - 79,655	46,546

TRAINING PLANNING AND MANAGEMENT STAFF

OUTPUTS	STATUS
1. Chief provincial medical officers in health planning and primary health care - 20	20
2. Provincial hospital directors - 20	
3. Directors of technical health services - 20	
4. Provincial chiefs of planning - 20	20
5. Chiefs of training, education and health promotion - 100	
6. District hospital directors - 100	
7. District health officers - 100	
8. Assistant district health officers - 100	
9. Promotion section chiefs, district hospitals - 103	100
10. Provincial supervisors - 20	

## RESEARCH

<u>OUTPUTS</u>	<u>STATUS</u>
1. Recruit research and evaluation specialist.	
2. Organize research and evaluation.	Completed in 1980
3. Identify priority study areas.	
4. Prepare research and evaluation guidelines.	
5. Establish interministry committee on primary health care evaluation.	

## STUDIES

1. Research study - household survey of health conditions.
2. Study of VHW/VHC performance.
3. Study of training program effectiveness.

Most of the project's training programs are on schedule, since many activities started two years before AID funding began. Nonetheless, some problems have surfaced. Project staff have had some difficulty recruiting a sufficient number of students for the nurse practitioner program. This may be because there are not enough candidates for the full-year training program, because rural supervisors are unwilling to release nurses for training, or because candidates are not offered a pay raise after training is completed.

A complete revision of the approach to training health workers to plan, manage, and supervise the PHC program has delayed the implementation of planning, management, and supervision activities. The RIG wants to include in the program all provincial and district administrators from provinces both within and outside of the original 20. The program for PHC supervisors has been incorporated into the training program for auxiliary midwives and junior sanitarians.

According to the 1980 evaluation, concern was expressed in every location about the shortage of vehicles and the inflated cost of gasoline, which was not anticipated in the FY 1980 budget. These are viewed as critical problems in the Rural Health Care Expansion project, since extensive travel and suitable transportation are required for service delivery, health education

activities, and supervision.

Research and evaluation activities have been delayed because of the late arrival (November 1979) of the project-sponsored research specialist. There is continuing disagreement about two AID policies: (1) AID continues to insist that all research be done by the Health Planning Division of the MOPH, although a study in progress reportedly overwhelmed the Health Planning Division study group; and (2) AID still will not approve paying honoraria to short-term MOPH research workers.

The mechanism for coordinating Health Services Research activities is in place and the guidelines for research have been written and published.

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**AID - Assisted  
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Summary Reviews**

**Latin America and the Caribbean**



**American Public Health Association  
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1981**

Part II

AID-ASSISTED PRIMARY HEALTH CARE PROJECTS IN  
LATIN AMERICA AND THE CARIBBEAN

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**BOLIVIA**

**IDENTIFICATION**

Project Name and Number: Rural Health Delivery Services Project, Number 511-0453

Location: Montero Region, Santa Cruz Department

Project Dates: FY 1975 - FY 1981

Funding Level and Sources: AID grant: \$882,000  
Government of Bolivia (GOB): \$443,000

Responsible Offices: Health Officer, USAID/Bolivia  
Bureau for Latin America and the Caribbean, Office of Development Resources, Health and Nutrition Division, AID/Washington

Long-Term Advisors: In areas of public health, research/evaluation, nutrition, public health administration, and community participation.

Contracting Firm: Management Sciences for Health (MHS) fielded various short-term consultants to assist in developing the project's information and logistics systems

Implementing Agency: Ministry of Social Welfare and Public Health (MSWPH)

## COUNTRY STATISTICS\*

Total Population: 5.3 million

Rural Population: 67%

Infant Mortality Rate: 168

Population Growth Rate: 2.5%

Life Expectancy at Birth: 52

GNP Per Capita: \$510

Adult Literacy Rate: 63%

## SYNOPSIS

This project marked a new approach in Bolivia to rural health care, strongly encouraged by AID, emphasizing community-based paraprofessional health workers and volunteers. A health delivery system consisting of five levels, from community to national, was designed and systems were developed for training, administrative and logistic support, evaluation and community organization. The design has proven basically effective, although numerous problems have arisen. The MSWPH appears to have accepted the concept of community-based preventive care, though implementation difficulties remain.

## BACKGROUND

A 1975 health sector assessment documented severe health problems in rural areas and lack of adequate health and support services: it was estimated that Bolivia's national health system reached only about 15% of the rural population. In the same year, a project was begun under USAID's Family Care Project to develop a low cost rural health delivery system and to determine the feasibility of extending the system to other areas of the country. The project was extended under its present name in FY 1976 as a pilot project in the Montero region with a shift in emphasis from broad health research to basic health services delivery. Completion was scheduled for December 1976. Several time and funding extensions have been caused by implementation delays, incorporation of additional communities, and the necessity for maintaining project impetus pending implementation of a follow-on loan project to sustain and expand the Montero system to other areas (511-0483). The terminal disbursement date was changed to December 31, 1980 and then changed again after the July 1980 military coup to March 1981.

The primary target group consists of an estimated 35,000 rural Bolivians in the Montero region. With secondary beneficiaries from surrounding communities included, the total reaches 120,000 people. Target communities were selected to represent different community types and ethnic groups and to provide information for possible replication. There is a strong tradition of community

self-help in the area, which the project sought to tap. Most inhabitants are subsistence farmers, members of spontaneous and/or official colonization groups, or farm laborers. Per capita income is about \$74 a year. There are both Quechua and Spanish speakers in the region. (Quechua speakers, particularly adult women, may know little or no Spanish.) Only 20-30% of the population can read and write. Health indices are somewhat below national averages.

### PROJECT DESCRIPTION

The project purpose is to implement a pilot rural health services delivery system emphasizing basic health services at the family and small community level in 4 nuclear and 33 satellite communities of the Montero region of Santa Cruz Department; and to develop a rural public health planning, technical administrative capability within the Bolivian Ministry of Social Welfare and Public Health (MSWPH).

The planned outputs are: effectively functioning systems focused on Montero at local, departmental, and national levels for service delivery and patient referral; human resources development; administration; logistic support; planning and budgeting; information and evaluation; intersectoral coordination (community organization was also incorporated as a system during implementation).

The project functions at five levels: community, sub-district ("area"), district, departmental and national. Health services are provided to the target group through several levels of auxiliary health workers (health promoters, nursing auxiliaries I, supervisory/technical auxiliaries II), backed by a District Outreach Team (DOT) of public health professionals to supervise and guide the auxiliaries and handle referral to sub-district and district hospital facilities.

- Each community health committee selects a health promoter, who receives 60 hours of training in basic preventive and curative skills. Remuneration, if any, is made by the committee from proceeds of drug sales.
- Nursing auxiliaries I, with 6 months training, are located in nuclear communities. They provide supervision and guidance for the promoters. Auxiliaries I and health promoters both provide services in nutrition, disease control, maternal-child health, hygiene and environmental sanitation.
- Auxiliaries II are assigned to sub-district hospitals and are supposed to guide and supervise the auxiliaries I and promoters, oversee supply distribution and provide somewhat more complex care.

- The District Outreach Team is responsible for more advanced curative services as well as supervision of lower level personnel, administration, and monitoring of support systems. Training is also done at the district level.
- The district health unit (unidad sanitaria) at the departmental level handles administration; the departmental hospitals provide curative care.
- The national level is charged with overall planning, programming, logistic support, and coordination.

The concept of widespread integrated rural health care with a preventive focus was innovative in Bolivia at the time the project was designed, although nursing auxiliaries trained by Methodists had been providing basic health services on a limited scale in some area health posts. The use of community health promoters and auxiliaries II is new to Bolivia. The Bolivian MSWPH had been unable to reach rural people on any large scale; it existed only nominally at the local level and operated poorly due to lack of support and supervision. Services provided were ad hoc and primarily curative. Its limited funds and over-centralized structure made it difficult for the MSWPH to shift from its urban, curative emphasis.

The Montero project was designed to help overcome these deficiencies and improve the people's health status by improving both the mix of health services and MSWPH methods for delivering them. The project marked a significant shift in USAID/Bolivia health program strategies as a first attempt at a comprehensive approach to Bolivia's complex and interrelated health problems. Past programs were built around single-purpose issues.

Another major distinction was the emphasis on regional planning and development, using a systems analysis approach to determine content and design of programs in light of local needs and characteristics. Past approaches had applied predetermined technological solutions at the central agency level.

Other innovations were an attempt to incorporate rural teachers and normal school students into the project's health education activities; and to incorporate traditional practitioners, particularly birth attendants, into project systems.

#### IMPLEMENTATION EXPERIENCE

Although the project's success in achieving its objectives has not yet been finally evaluated (the 1980 evaluation had not been released as of July 1981), evidence available to date suggests qualified success. As a pilot effort, the project was successful

in that it resulted in the extension of its approach and systems to other areas of the country, under the Rural Health Delivery System loan project (511-0483). Specific structural constraints and other factors affecting achievement of project objectives are described below.

CURRENT PROJECT STATUS

<u>OUTPUTS</u>	<u>STATUS*</u>
1. Human resource development	1. Curricula designed and functional. Training activities complete except midwives, 741 trained (target was 467) (8/78).**
2. Health service delivery system.	2. Service delivery began late 1977, over 1 year behind schedule. Estimated coverage of 44% of target group (15,400 out of 35,000) (8/78). 33 communities served (of 44) by 25 health promoters; 8 communities not covered (promoter resigned); 11 health posts and 14 auxiliaries I (of 12); 4 health districts and 3 auxiliaries II (of 8); district outreach team of 7 technicians (11 planned). (3/79)
3. Administrative/logistic support systems.	3. Systems working 99% as planned except at national level (8/78).** Only 70% of manuals completed, over 1 year behind schedule (8/78).** Revised logistic system completed 9/79.***
4. Information system/research/evaluation.	4. Revised information system functioning 3/79.*** Sufficient data to determine replicability (GOB approved extended RHDS in 1978** based on project design).

\* Most recent numerical data (dates in parenthesis)

\*\* Source: PES, 1979

\*\*\* Source: Monthly Progress Reports

5. Community organization.

5. Mechanism for community participation not in original design. Methodology and manual developed during implementation phase\*\*. Manual completed 7/79.\*\*\*

### Administrative Structures

The project sought to develop systems within the MSWPH that would enable it to deliver effective basic health services to the rural population. Five systems are now in place and functioning (see chart on p.5). Other systems (personnel, intersectoral coordination, budget and planning, supervision) have not been effectively implemented. USAID/Bolivia made an intensive effort to involve the MSWPH fully in the planning process for both the Montero project and the follow-on expanded loan project (0483), in an effort to encourage the MSWPH to take responsibility for the project and to integrate it fully into the Bolivian health system (while at the same time modifying the system). There is some evidence that this is happening: through the project, the MSWPH has become aware of the need for rural health care at the village level and has begun to develop systems to link rural primary care with higher level care. The project's major achievement may be an increased consciousness among key MSWPH officials that health needs can be met affordably through a community-based, preventive health care system. However, some questions have been raised by AID sources concerning the MSWPH's ability to manage the project successfully after outside assistance ends — much depends on the increased capability to be developed under the health loan project. Questions also remain as to longer-run political and administrative commitment. A crucial problem is political instability. There have been several changes of government since the project began, and even more changes in Ministers of Health (8 in 1 1/2 years), making continuity of commitment difficult. However, a core group of administrators and technicians within the MSWPH has accepted the RHDS concept and has demonstrated continuing support.

One of the key lessons learned has been the need for flexibility in the design and implementation of health delivery systems to meet the needs of a very diverse country. Delivery, support and supply systems must be able to adapt to widely varying conditions. The project attempted to create such flexibility, providing built-in alternative processes and minimal decision levels in project systems manuals. The system design process for community organization is being written to help develop a stronger systems design capability in the MSWPH.

According to all sources consulted, deficiencies in the Bolivian administrative system have been a major cause of the project's problems and delays. The system in the MSWPH (and in the entire government) is highly centralized. There is little

delegation of authority, especially regarding budget and personnel. (The project's effort to encourage decentralization of these functions to the departmental level have not been successful to date, though there is evidence that the MSWPH is becoming increasingly aware of the importance of decentralizing its operations and integrating the RHDS more completely with the existing system—including district and departmental hospitals, which now operate in a parallel system.) Delays in budget approval and funds disbursement caused major difficulties: salaries were delayed, sometimes for months, breeding discontent and attrition among project personnel; funds for vehicle maintenance and other supplies and equipment often were unavailable when needed, drastically slowing activities; a number of newly-married female auxiliaries left the project because of inability of the personnel system to approve their transfers to other towns where their spouses lived. The need for more qualified counterpart personnel was frequently expressed in project reports and evaluations.

Other administrative problems have arisen in AID. This project was USAID/Bolivia's first attempt at an integrated health project; according to the 1979 evaluation, its time/effort/personnel calculations were not realistic. Initial delays were due to problems in getting commodities and technical advisors to Bolivia, caused by both AID/Washington and the mission. A mission memo stated that there were delays of 7 to 17 months in contracting the national and regional advisors, respectively. Sixteen months after project approval, only 85% of materials needed had arrived. (The mission found that ordering direct from suppliers, rather than through GSA, saved about 11 months.)

### Socio-Cultural Factors

Anthropological studies and prior experience by project advisors helped avoid serious cultural fit problems, but some did inevitably arise. Most importantly—and due as much or more to political as religious-cultural reasons—the family planning component envisioned in the original project design was dropped due to Catholic Church influence on the MSWPH.

Incorporation of traditional practitioners—in this case midwives—never occurred, apparently due both to the low priority accorded it by project personnel and resistance by the midwives themselves who are largely illiterate, suspicious, older women influential in their communities and unwilling and/or unable to bridge the cultural distance between their ways of doing things and those promoted by the project.

Community interest surpassed expectations, but people became frustrated when their communities were organized too soon before services could be provided. Problems also arose regarding community responsibility for paying local health promoters. Some communities proved to be too transient and unstable (due to migratory labor patterns) to fulfill this responsibility.

Although no special efforts were made to incorporate women, they play important roles in the project: they and their children are beneficiaries; they also compose about half of the health promoters and most of the auxiliaries I, as well as majority of district technical personnel. Contrary to expectations, a high proportion of the auxiliaries II are male, due mostly to constraints on women's mobility in rural areas. In the project's experience, the most successful community committees have been organized by women; women have also been more successful in dealing with female clients and getting them to accept referral to health centers.

### Project Design

The overall design seems to be relatively successful. The systems are being replicated with some modifications under the loan project.

The auxiliaries I appear to be working effectively. A 1978 survey evidenced a high degree of accuracy in diagnosis and treatment: quality of care provided correlated strongly with training methods; the group taking a redesigned training course, shorter but more competency-based than the original, provided consistently better care. There was also some correlation between frequency of supervision and quality of care, but the key factors appeared to be training and especially the availability of supplies. With adequate logistical support, auxiliaries appeared to cope well with very little supervision. A 1979 MSH evaluation found that ninety percent of the health workers had manuals, and over half (including many with little formal education) said they used them regularly.

The evidence for improved health status among the target group is difficult to assess because of lack of adequate baseline data. An evaluation covering 1976-78 found that 44% of the target group of 35,000 was being served. Auxiliaries were providing a full range of services, but promoter services were spotty and irregular. The key factor leading to promoter failure was their premature training and assignment to villages before they were supported by sufficient drugs and supervision. They lost credibility.

Utilization of services was higher than the national average; project auxiliaries averaged 63 visits per month vs. 16 for non-profit health post auxiliaries. The immunization, potable water, and latrine construction efforts appear to have been successful. The coverage rate of the 1978 vaccination campaign was 200% more effective than the 1975 campaign by the MSWPH using traditional methods.



Certain deficiencies in design and systems have also become apparent:\* serious conflict arose from failure to fully orient Bolivian health professionals, particularly nurses, about the project, and there was resistance to the incursion of paraprofessionals and promoters on their "turf." Relatively high salary levels for project personnel caused strong resentment (with per diem, auxiliaries II earned as much or more than a professional nurse). Efforts have been made to win over the nurses by holding workshops for them in Montero, and their acceptance is increasing.

The concept of the auxiliaries II supervising promoters and auxiliaries I did not work out because the social distance between them was too small to permit authority. The auxiliaries II have ended up being intermediaries between the auxiliaries I and higher levels. The auxiliaries I, therefore, work largely without supervision. It was also found that supervisors of the opposite sex did not work well because of sexual liaisons/pressures. Age and sex of trainees varies by time of selection, since different groups are attracted at different times of the year because of harvest demands. Older workers have proven to be more effective than younger ones.

A serious problem has been a high attrition rate among promoters and auxiliaries, mainly because of payment and logistical problems in getting drugs and supplies. In August 1979 only 14 promoters were working (of 43 trainees); 11 communities were left without an active promoter. There has been much discussion of the need for a more stable way of paying promoters (the present system of payment by community committees is highly variable in type of payment, amount and frequency) and for development of other, non-monetary incentives, but no final decisions have been made. Turnover among auxiliaries has been very high (estimated at 40-50%), largely because of low and irregular payment by the MSWPH.

The information system had to be redesigned (1978) with assistance from Management Sciences for Health, because it was found that promoters and auxiliaries were spending from 35 to 60% of their time on paperwork rather than service delivery. The number of forms used was reduced from 12 to 3, thus permitting more time for services while still collecting essential information. Nonetheless, information being collected has not been as useful as hoped for.

Management Sciences for Health also helped redesign the logistics system, which now appears to be working well. The true effectiveness of the health care systems established under the Montero project will only be revealed with time: the test will be the MSWPH's ability to maintain them after outside assistance ends, and adapt them to other areas of the country as part of an integrated health delivery system.

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\*Sources for this section are present and former AID/W and USAID/Bolivia project personnel.

### Postscript

(Excerpt from a letter by Dr. Lee R. Hougen, Chief, Health/  
Humanitarian Assistance Division, USAID/Bolivia, October 31,  
1980.)

Prior to the military coup in July 1980, things were starting to roll: while the Montero project was entering its last stage of disbursements, considerable progress was being made to incorporate it as the pilot district into the new project and establish an administrative hierarchy in the Department of Santa Cruz. The new director, on board since February 1980, was very strong, and was being supported by a national policy of decentralization.

In the aftermath of the coup, the Montero project is being allowed to finish which means that certain disbursements will take place. Some planned activities such as the purchase of drugs to be used in the incorporation of the hospitals into the system will, however, be dropped. Without the REDS follow-on project, any further activities will be somewhat superfluous, particularly as it appears that almost the entire top-level staff of the Santa Cruz Department has been removed, erasing the institutional memory.

Similar rural health projects being negotiated by the Germans and the BID appear also to be halted, most new positions have been eliminated, and project staff is being dispersed. The immediate future does not look bright for the development of rural health services.

A final evaluation of the Montero project was carried out in May and June 1980. There were, of course, numerous recommendations, but the most important we feel are:

- a) The process of development of a rural health delivery system should be a gradual one, with no serious attempt to deliver services until all of the support components are in place.
- b) The system should not attempt to incorporate the village level too quickly as without the support systems, significant regression can be expected. A better strategy is to develop a strong and effective system down to the health post level; and then slowly incorporate the village level as the process of community development permits.
- c) The process of community development should not focus on stimulating acceptance of the program, but in

preparing communities to analyze their own needs and desires for full or partial inclusion in the system.

- d) The system should fit within the existing administrative hierarchy of the region, or at least should not operate in isolation.
- e) The inclusion of the various sub-systems, i.e., information, supplies, administration, maintenance, supervision reference, etc. are all critical to the success of the system, and the absence of any one will disproportionately weaken the overall whole.
- f) Many training efforts, while feasible and beneficial on a pilot project basis, are not transferable to a large scale project dependent on normal government funding. Such training the Montero project included promoters and community development.
- g) To enhance the use of scarce community resources, every effort should be made to link the health program with activities in other sectors. This is particularly important when it is recognized that health is generally given a low priority in the community.
- h) Wherever possible,, the health delivery system should take advantage of whatever capacities already exist in a region or community, including other agencies or groups providing services, and indigenous health practitioners. In general, the strategy should be to complement whatever is going on with whatever is necessary to establish a totally integrated system.

These lessons appear to be valid not only for future projects here in Bolivia, but presumably for elsewhere. They are valuable lessons, and in this sense, the Montero project has pointed the way for future rural health projects.

## REFERENCES

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Hartman, A. Frederick and Peter R. Rouselle. Evaluation of the Health Information Sub-system in the Montero Project in Rural Health. Management Sciences for Health, August 1979.

Letter from Dr. Lee R. Hougan, Chief, Health/Humanitarian Assistance USAID/Bolivia to Barbara Sandoval, LAC/DR. October 31, 1980.

Memorandum Audit Report No. 1-511-77-17, December 10, 1976. (Covering June 1975 through September 30, 1976).

Project evaluation summary (PES), 5/17/79, covering the period from June 1976 through August 1978.

Comments on first draft by Dr. Lee R. Hougan.

### Interviews:

James Doster, LAC/DR/EN, economist, member of project design team for follow-up health loan, 6/2/80.

John Massey, LAC/DR/EN, project manager for Bolivia, 6/5/80.

Nancy Ruther, former project manager for Montero project, USAID/Bolivia (by telephone), 6/6/80.

Carlos Tobon, former chief advisor for Montero project in Santa Cruz, 6/18/80.

BOLIVIA

IDENTIFICATION

Project Name and Number: Mobile Health Program - Chiquitos Vicariate, Number 511-0459

Location: Provinces of Velasco, Sandoval and Chiquitos (Chiquitos Vicariate) Department of Santa Cruz

Project Dates: 1976 - 1980

Funding Level and Sources:

USAID/OPG:	\$110,000*
Government of Bolivia:	\$ 75,000
Chiquitos Vicariate:	\$104,000
Catholic Relief Services:	\$ 24,000

Responsible Offices: Health Officer, USAID/Bolivia  
Bureau for Latin America and the Caribbean, Office of Development Resources, Health and Nutrition Division, AID/Washington

Implementing Agency: Santa Isabel Hospital, Chiquitos Vicariate  
Ministry of Social Welfare and Public Health (MSWPH)

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\*May have been reduced to \$105,000. See "IMPLEMENTATION EXPERIENCE" section.

## COUNTRY STATISTICS

Total Population: 5.3 million

Rural Population: <u>67%</u>	Infant Mortality Rate: <u>168</u>
Population Growth Rate: <u>2.5%</u>	Life Expectancy at Birth: <u>52</u>
GNP Per Capita: <u>\$510</u>	Adult Literacy Rate: <u>63%</u>

## SYNOPSIS

This project was undertaken to extend primary health services to the remote Chiquitos Vicariate region via mobile health teams, supported by auxiliary nurses and rural promoters to be trained and deployed throughout the area. At present, services are being delivered to a much smaller number of communities than originally planned. Available information indicates numerous delays and problems in conception as well as implementation.

## BACKGROUND

The Chiquitos Vicariate is a remote portion of the Department of Santa Cruz covering 195,000 square kilometers near the Brazilian border. The Vicariate is an administrative division of the Catholic Church, which operates the Santa Isabel Hospital in San Ignacio de Velasco, as well as other development assistance and education programs, using its own personnel (predominantly Austrian priests and nuns), in collaboration with GOB agencies and programs. The Vicariate operates a radio station (directed by a German priest) and publishes a newspaper to support its outreach efforts.

The majority of the approximately 100,000 people in the area are widely dispersed subsistence farmers with an estimated income of \$300 per family (5-9 persons). Infant mortality is 300/1,000 live births. About half of the children die before the age of 5. Women average 8-10 pregnancies between the ages of 15 and 49. Over 90% of the population suffer from parasitic infections. More than 60% of preschool children are malnourished. Tuberculosis, measles, yellow fever and malaria are prevalent.

Having only very limited access to health facilities, people have had to rely largely on traditional practitioners or home remedies. This project was designed to link the Santa Isabel Hospital with the outlying rural areas and greatly increase basic health coverage. It also proposed to reserve the limited capacity of the hospital for those patients requiring hospital care by providing low cost outpatient treatment.

The project is funded through an operational program grant (OPG) to Catholic Relief Services (CRS) in Bolivia, which is responsible for overall coordination and evaluation. Funding is also provided by CRS, the Vicariate and the GOB, through the Ministry of Social Welfare and Public Health (MSWPH).

### PROJECT DESCRIPTION

The project seeks to institutionalize a system of basic health services for the rural population of the Chiquitos Vicariate by establishing a link between the health services of the Santa Isabel Hospital and approximately 85 remote communities and by promoting community participation and self-help to improve the people's health status.

The major outputs are to be: trained, deployed, and equipped rural health personnel; health education manuals; audiovisual materials; enhanced teaching ability of health personnel; radio and newspaper health information; data collection systems; loans for latrine construction/improvement.

Outreach to remote rural communities was planned via two mobile health teams (METs) in conjunction with ten strategically located rural health posts, each staffed by a rural health officer (RHO) and supported by promoters known as rural collaborators (RCs) in each of the 85 smaller communities.

The MET was to consist of a doctor, nurse, and driver, plus one nursing assistant rotated between the teams and/or to the health posts as the need arose. The MET was to have a specially equipped truck and motorcycles. Acquisition of a motor launch was planned to permit access by river to the northern area. The MET provides both preventive and curative services.

The MET is supposed to supervise the health posts and RHOs and provide on-the-job training. Initially, the RHO/auxiliaries are to receive one month of training\* at the Santa Isabel Hospital, as well as occasional MSWPH courses. Providing preventive services, routine curative care, and referrals, the RHOs assure continuity of coverage between MET visits. The MET personnel and the RHOs are salaried employees of the MOH.

The promoter or RC is a part-time volunteer who serves as a change agent in the community. According to the project paper, RCs are chosen by the MET with the advice and consent of Vicariate per-

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\*The 1979 evaluation indicates that auxiliaries are receiving two months of training.

sonnel familiar with the communities.\* They must be between the ages of 25 and 35, married, respected members of their communities, and able to read and write. RCs complete one month of training, divided into two separate courses. Their duties are primarily those of contact, control and compilation of information; the RC provides support and entree to the community for the MHT.

According to the project paper, the major activities to be carried out by this network of health care providers include a hygiene-sanitation program, a maternal/child health (MCH) and nutrition program and a tuberculosis control program. All include educational activities as well as service provision.

Most services and materials are offered at little or no cost to the beneficiaries. Small fees are collected for some services such as parasite treatments, maternal-child and general consultations, vaccines, etc., to help defray project costs and also make the people more active rather than passive recipients.

The hygiene-sanitation program involves education on the importance of sanitation and potable water and instruction and assistance in latrine building (through use of a block-making machine and revolving credit fund). Families that have cleaned up their environments and are using latrines, receive anti-parasite medication. Mini-courses on other aspects of hygiene are also given.

The MCH and nutrition program is described as the first such effort in the area. In group discussions mothers are taught nutrition, hygiene and child care, and receive prenatal guidance. A weight control system is used to monitor children's health and growth, and vaccinations and medications are given as required. About 300,000 pounds of PL 480, Title II foodstuffs are being distributed to upgrade the health status of mothers and preschool children participating in the program. The project design includes funds which were added by AID for training 30 midwives. There is no mention in the paper of family planning activities.

The tuberculosis control program emphasizes diagnosis and registration of TB cases and strict control of progress by RCs, RHDs and MHTs. All family contacts are also controlled, and BCG vaccine is administered as necessary. Most cases are treated on an outpatient basis.

#### IMPLEMENTATION EXPERIENCE

The information available in Washington on this project is fragmentary. One annual progress report and some monthly reports were obtained from CRS/New York, and an evaluation done in July

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\*The evaluation states that promoters are selected by the community on the basis of recommendations on their qualifications, but it does not say who makes the recommendations.



1979 by a sociologist was supplied by USAID/Bolivia. More complete information should be available in Bolivia, but could not be obtained at this time.

CURRENT PROJECT STATUS

<u>OUTPUTS</u>	<u>STATUS (8/80)</u>
1. Training and deployment of rural health personnel:  2 mobile health teams 10 rural health officers 85 rural collaborators	1. One team functioning** Over 50 auxiliaries* 281 trained** (see narrative)
2. Health education manuals.	2. No information.
3. Enhanced teaching ability through use of audiovisual materials.	3. Functioning, but with inappropriate materials.**
4. Radio and newspaper health information.	4. Radio functioning to some degree, but there have been technical difficulties and lack of trained personnel. (see narrative);** no information on newspaper.
5. Data collection systems.	5. Form and type of statistical data should be defined;** no other information.
6. Loans for latrine construction improvement.	6. No information.

\*Source - Progress Report #3, April 19, 1979

\*\*Source - July 1979 Evaluation

The same MSWPH administrative and logistic constraints noted for the Montero and RHDS loan/grant projects apply in Chiquitos, compounded by the area's extreme isolation and factors peculiar to this project.

The reports and evaluation indicate considerable delay in vehicle and equipment shipments. The mobile unit vehicle did not arrive until November 1978; some equipment still had not arrived by

mid-1979. Consequently, the mobile team did not begin work until late 1978, and only began intensive activity in March 1979 due to heavy rains.

Coordination between the project and the GOB and MSWPH seems to leave much to be desired: both the evaluation and reports indicate that the director of the Santa Cruz departmental health unit was unaware until recently of the project's existence. The evaluation also reveals that other agencies operating in the project area, such as the Santa Cruz Regional Development Corporation and the National Community Development Service, know nothing about the project. USAID mission efforts to establish communication and coordination between Chiquitos and other AID supported projects were largely unsuccessful because of Chiquitos' physical inaccessibility.

One hopeful sign that the MSWPH may be attempting to integrate isolated efforts into a more coherent system is the fact that a seminar on rural health promoters was held in December 1979 in San Ignacio de Velasco, in which representatives of several projects participated, including Chiquitos and Montero.

According to the cited evaluation, however, rather than promoting GOB participation and ultimate responsibility for health services in the area, the project has resulted in some ways in a reduction of government responsibility, principally as a result of the withdrawal of the government-supported physician and mobile unit from the project area.

The original design included two mobile health teams and vehicles. Funding for salaries was divided between AID, the GOB and the Vicariate. Rather than pooling resources to pay personnel, apparently the two doctors and nurses were paid by different organizations. According to the evaluation, one doctor, one nurse and the two drivers were permanent employees of the project paid from AID/Vicariate funds. The others, including the other doctor, who was doing his year of social service, were paid by the MSWPH. The two doctors thus became responsible to different chiefs and worked under different conditions. This structural conflict was aggravated by professional and personal friction stemming from the reluctance of physicians, especially the MSWPH doctor, to accept supervision from the local project manager, a nun (and nurse), and complicated further by the latter's difficulty in delegating authority. The end result was that the mobile team supported by the GOB left the project; its vehicle became the San Ignacio health center ambulance, and its doctor worked independently at the MSWPH health center, serving only the larger communities and charging for service. The other hospital supported mobile team was left to cover most of the rural area alone (there is no mention of the motor launch proposed originally). There is no coordination between these units—some services overlap and other areas are left without service. The project has yet to be integrated into the GOB health system.

Partly as a result of the foregoing, the project's coverage has been reduced from 85 to 22 communities, of which only 8-12

receive intensive coverage (July 1979 evaluation). The evaluation also points out that project goals were unrealistic given the resources available, both with regard to geographical coverage and projected impact. Impact statistics are, in any case, unavailable. The progress report states that the team made over 60 community visits between May 1978 and April 1979; a 100% improvement in sanitary conditions was reported in some communities. Difficulties with hospital referrals due to lack of transportation were noted in the evaluation.

The number of health workers trained varies considerably from the original design. Reference is made in the April 1979 progress report to training over 50 women (in two-month courses) as nurse's aides (auxiliaries) who run rural health posts and perform a wide range of promotive, preventive, curative and administrative functions. These appear to be the RHOs described in the project paper, but in considerably greater number. There is no information about how many are actually working, or where. The evaluation indicates that the auxiliary school is independent of the project and is generally effective, although it is short of resources, and it does not provide adequate training in social aspects and leadership responsibilities. The evaluation states that 281 promoters (RCs) have been trained in first aid, environmental sanitation, public health, contagious diseases and anatomy, and organization and leadership (noting that the latter training is weak because of lack of specialized personnel). A September 1979 monthly report refers to a third training course for promoters in which 27 were trained. Due to this discrepancy in figures, particularly with the number of communities served, future updates should seek corroboration on number trained and actually working.

Both the evaluation and the April 1979 progress report give the grant amount as \$105,000 rather than \$110,000 as stated in the grant agreement. It is not clear whether the \$5,000 that was added for the midwives training program has been dropped. There is no mention in the evaluation of such training; the progress report refers to aides/auxiliaries acting as midwives, so the design may have been changed.

Deficiencies in other project outputs were also described in the 1979 evaluation. It was noted that the radio station was out of commission for about a year (apparently during 1978-1979, judging from reports) due to technical problems, although the April 1979 report said it previously had been providing health and nutrition education and announcements of the mobile unit's schedule. The July 1979 evaluation stated that lack of time and specialized personnel to prepare materials had resulted in the suspension of health and agricultural broadcasts. Funding is scarce; the evaluation suggests that increased funding and personnel could make the station an effective means of outreach if combined with technical and financial backup to assure an adequate supply of receivers and batteries.

The audiovisual material being used was described as largely inappropriate: too technical and too unrelated to local conditions. Other equipment was also inappropriate: the mobile unit vehicle uses too much fuel and its suspension is inadequate; only one refrigerator arrived, but it is too large and there are no spare parts. Portable motors are too large, scales are too small, and there are no films for use in the projector.

According to the evaluation, one serious deficiency is lack of community organization and initiative in solving problems. There is evidence of community acceptance and support: communities have formed health committees and mother's clubs, built latrines, housed and fed the medical team during its visits, and built dispensaries and housing for the auxiliaries. But the people tend to see the project's services as "manna from Heaven," a gift of the "Madrecitas" (nuns), making them recipients of charity rather than active participants in development. The evaluation states that project personnel are neither encouraging nor discouraging this attitude, and strongly recommends more effort, using specialized workers, in community organization.

Many of the problems observed are attributed by the evaluation to the project's origin and orientation, described as a basically paternalistic initiative of the Bishop and his secretary, created without any input whatsoever from the MSWPH departmental health unit, the nuns running the hospital, project personnel or community leaders. It is noted that project personnel were unaware until recently of the project's objectives and other elements in the project documents. These factors should be re-examined in future updates in light of additional information which may become available.

REFERENCES

Hurtado, Javier. Evaluacion del Proyecto Movil de Salud De Chiquitos. La Paz, July 1979.

Plan Anual de Trabajo (Annual Work Plan) and monthly reports for August 1979 through April 1980. Catholic Relief Services. New York.

Project file from AID/Washington, LAC/DP, Social Development Division (office for OPG projects).

Project Progress Report No.3 April 19, 1979. Catholic Relief Services, New York.

Comments on first draft by Dr. Lee R. Hougan.

Interview:

Nancy Ruther, former USAID/Bolivia health official, June 1980.

BOLIVIA

IDENTIFICATION

Project Name and Number: Rural Health Delivery Services Project, Number 511-0483

Location: Departments of Santa Cruz, La Paz and Potosi

Project Dates: 1979 - 1984

Funding Level and Sources: AID loan: \$10,000,000  
 AID grant: \$ 3,000,000  
 GOB: \$ 6,700,000  
 Communities: \$ 600,000

Responsible Offices: Health Officer, USAID/Bolivia  
 Bureau for Latin America and the Caribbean, Office of Development Resources, Health and Nutrition Division, AID/Washington

Contracting Firm: (Not yet selected)

Implementing Agency: Ministry of Social Welfare and Public Health (MSWPH)

## COUNTRY STATISTICS

Total Population: 5.3 million

Rural Population: 67%

Infant Mortality Rate: 168

Population Growth Rate: 2.5%

Life Expectancy at Birth: 52

GNP Per Capita: \$510

Adult Literacy Rate: 63%

## SYNOPSIS

This project is designed to extend the health delivery system developed under the Montero project to three departments, using a similar system of community-based health promoters and auxiliaries, supported by referral, supply and administrative systems. Certain modifications have been made based on the Montero pilot. Implementation has been delayed and was to begin during the fall of 1980. However, due to the coup of July 17, 1980, funding was withdrawn for this project in August.\*

## BACKGROUND

In 1973, under AID's "New Directions" mandate, USAID/Bolivia decided to increase its involvement in health and undertook its first health sector assessment (BSA). This BSA marked a turn toward integrated, community-based programs, but left much to be desired with regard to MSWPH participation. Emphasizing data-gathering rather than joint AID/MSWPH decision-making and strategy development, the BSA did not lead to a change of approach by the MSWPH.

The Montero project (see project summary) provided the initial step in developing a new approach to health care in Bolivia and, more importantly, a shift in goals and strategies toward mobilizing Bolivian resources on which the present loan/grant project seeks to build. In the new project, the innovations developed in Montero are being extended to a much larger area and are designed to eventually cover the entire country.

The Rural Health Delivery System Project is an indication of the Government of Bolivia's (GOB) interest in addressing the very serious health problems documented in the 1975 health sector assessment. The National Economic and Social Development Plan (1976-1980) includes a national health plan that emphasizes extension of health and nutrition services.

\*Note - This project summary was written prior to the latest coup (summer 1980).

This project will implement a rural health delivery system (RHDS) in three departments (Santa Cruz, La Paz, Potosi) based on the experience gained in the Montero pilot project (511-0453). A loan from the Federal Republic of Germany is being negotiated to cover RHDS services in three additional departments (Cochabamba, Oruro and Chuquisaca) using a similar methodology. If this loan is approved, it is planned that six of the nine Bolivian departments will be fully covered; the rest of the country will benefit from improved administrative and support systems at the national, departmental and hospital health center levels. It is expected that this institution building will provide a basis for future extension of services to the health post level throughout the country.

### PROJECT DESCRIPTION

The project purpose is to extend, improve and support health services available to the rural poor in the project area; introduce necessary administrative improvements and reforms in the MSWPH; and stimulate community participation and responsibility for health services.

The planned outputs are the following:

- health services - basic health, maternal-child health, nutrition, immunizations, referral, health education and environmental sanitation services at the local level;
- community organization - establishment of community health committees and mother's clubs;
- human resources - recruitment, training, supervision and remuneration systems for health workers;
- logistic system - provision of medicine, vaccines, drugs, supplies, equipment, vehicles and maintenance;
- facilities - construction of warehouses, hospital health centers, health/medical posts;
- other support systems - information/evaluation, administrative reform, planning system.

The project is designed to reach approximately 651,000 people in the rural areas of the departments of Santa Cruz, La Paz and Potosi, using community-based health promoters and nursing auxiliaries to provide basic preventive and curative services, supported by higher level referral, supply and administrative systems.

Project activities will be undertaken on five levels: (1) in the rural community, rural health promoters will provide preven-



tive and some curative services under the sponsorship of community health committees; (2) health/medical posts in larger towns will provide preventive and more advanced curative care under the direction of a nursing auxiliary I (and in some cases a physician), who will also supervise health promoters; (3) hospital health centers (HHCs) located in major towns will provide more advanced preventive and curative services plus administrative support in personnel supervision, storage and distribution of medical supplies, training and data collection. Services will be provided by nursing auxiliaries II, social work and nutrition auxiliaries and environmental health technicians, in addition to the existing hospital medical staff; (4) Department health units (unidades sanitarias), through a rural health project team at each unit, will provide supervision and technical assistance to the three lower levels and have primary responsibility for project administration; training centers are also to be established at this level; and (5) at the national level, the MSWPH, through an RBDS project team, will undertake programs of administrative reform, including decentralizing programming functions, improving training facilities at medical schools and the School of Public Health, increasing preventive programs and strengthening logistical support, planning and information systems.

#### IMPLEMENTATION EXPERIENCE

Implementation of this project, scheduled to begin in March 1979, has been delayed. There was a six-month delay in signing the loan agreement, and over a one-year delay before the GOB met all conditions precedent (CP) to funds disbursement. The initial request for a proposal (RFP) for technical assistance is just being submitted now, over a year late; contract approval is expected by September or October 1980 (a 9 to 10 month delay). These delays have been attributed by AID/W principally to Bolivian political instability and changes in Ministers of Health.\*

The following chart summarizes the project's current status:

CURRENT PROJECT STATUS

OUTPUTS	STATUS
1. Health Services. <ul style="list-style-type: none"><li>- 780 communities with health promoters (HP)</li><li>- 292 health/medical posts (H/MP)</li><li>- 57 hospital health centers (HHC)</li><li>- 3 departmental RHDS teams</li></ul>	1. Service delivery plan completed 11/79 (CP).***  Implementation not yet begun. Planned to begin 6/81.**
2. Community organization. <ul style="list-style-type: none"><li>- 780 level 1 community health committees (CHC)</li><li>- 292 level 2 CHC's</li></ul>	2. Not yet begun. Implementation planned to begin 9/80 (arrival of TA).**
3. Human resources/personnel trained. <ul style="list-style-type: none"><li>- 780 HP's</li><li>- 102 auxiliaries I</li><li>- 56 auxiliaries II</li><li>- 56 social work auxiliaries</li><li>- 56 nutrition auxiliaries</li><li>- 140 administrative support personnel</li><li>- 62 biostatisticians</li><li>- 48 lab technicians</li><li>- 3,120 members of CHC's</li><li>- 780 rural teachers</li><li>- 780 community leaders</li></ul>	3. Training plan completed 11/79 (CP); implementation not yet begun.**
4. Logistic support system.	4. Maintenance plan (CP) not yet done as of 2/80; drug procurement committee (CP) organized 9/79**
5. Facilities. <ul style="list-style-type: none"><li>- Remodel 90 H/MP's</li><li>- construct 3 new HHC's</li><li>- construct 10 HHC warehouses</li><li>- construct/improve 3 unidad sanitaria facilities</li><li>- construct 1 national warehouse/office complex</li><li>- remodel school of public health</li><li>- 80 wells for rural water supply</li></ul>	5. Implementation not yet begun.**
6. Other support systems.	6. Implementation/evaluation plan

- information/evaluation                      completed 11/79 (CP); technical assistance and financial
- administrative                              plans (CP) completed by 2/80;
- planning/budgeting                        implementation not yet begun.\*\*

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- \* end-of-project status, from PP
  - \*\* information from monthly reports and PP
  - \*\*\* CP = conditions precedent to loan disbursements

The earlier Montero Project incorporated innovations for both AID and the Ministry. For USAID/Bolivia, the project was something of an anomaly: a small-scale action project characterized by unusual working arrangements and very strong liaison with Bolivian personnel. The high level of participation by Bolivian personnel was fostered by adjustments in AID procedures and communication patterns (including extensive translation of documents and unusually high use of informal non-bureaucratic communication). The project demonstrated that it is possible to mobilize resources and effect a change in attitudes, despite the existence of many problems in actual service delivery.

The current loan project was designed to continue Montero's emphasis on resource mobilization while also transferring resources. The project planning process was a joint one with USAID and MSWPH personnel (the project paper was the first translated into Spanish and was in fact partly developed in Spanish). The same participatory approach has been extended to some degree to Bolivian nursing and medical professionals, to try and overcome the resistance encountered in Montero.

The MSWPH has also undergone changes and appears to be accepting the need for decentralization and full integration of the REIDS into its system. Decentralization of administration down to the departmental level is being stressed; the loan also provides means through which existing rural hospitals can be improved and incorporated into the REIDS scheme rather than operating in a parallel fashion as they have in Montero. Support for the REIDS appears strong among key Ministry personnel; it has survived 8 different Ministers.

### Policy Issues

In working out the loan agreement, several basic policy issues were faced. Resolution of differences between the Mission and the Ministry has appeared to strengthen the REIDS concept.

The most basic issue was the definition of rural health services and relative preventive/curative emphasis. The MSWPH originally took a curative position, and on the basis of the Montero experience, gradually came to agree with a preventive, community-based approach.

The family planning issue was resolved by dropping any operational reference (Bolivian opposition was implacable), but by retaining family planning services delivery as a long-term objective to satisfy AID's Congressional mandate.

The MSWPH agreed to drop its insistence on a rural social insurance scheme which the mission felt to be unworkable and feared would divert resources from a more practical RHDS approach. The project paper retains the social insurance concept as a long-range goal to be facilitated by the implementation of RHDS.

### Manpower and Financing

Some changes have been made in this project as a result of the pilot experience in Montero. The auxiliaries II are to be given additional training to improve their technical and supervisory capacity. It has been agreed that they are to be recruited at least partly from the auxiliary I level to provide opportunities for advancement. Social work and nutrition auxiliaries are new personnel categories created under this project to augment services at the hospital health center level.

Cost and manpower availability have dictated that the outreach team be on the departmental rather than the district level as in Montero.

Resolution of the turnover problem among promoters and auxiliaries encountered in Montero will depend on the success of project efforts to decentralize the MSWPH's personnel and budgeting system so as to permit prompt payment of salaries and personnel transfer. An efficient logistic system is also important to keep field personnel supplied. The revised system recently set up in Montero appears to be working, but it is too soon to say whether these systems can be effectively replicated in Bolivia's diverse regions.

Discussions continue regarding the problems involved in community payment of health promoters. Revolving funds have been established from proceeds of medicine sales, administered by the community health committees. Medicines are sold by the promoters at a markup of about 20%; the funds are turned over to the committee and used to pay the promoter and restock supplies. These funds, however, are often too irregular or inadequate to permit regular payment. It has been recommended that the MSWPH supplement the fund, providing perhaps 50% of the promoter's salary. This change may also help prevent an overemphasis on medicine sales (curative care). Another suggestion is the formation of cooperatives or

regional corporations to subsidize the promoters. No final decision has been made.

Training of midwives was never implemented in Montero. Although there seems to be some feeling that this is desirable, it has not been included in the official training targets in the project paper.

The cost issue for this project has been important, since the Montero project costs greatly exceeded expectations. The current feeling is that the experience gained in Montero will help keep costs down. Furthermore, the MSWPH is now in a better position to take advantage of outside technical assistance, much of which was underutilized in the Montero project.

#### Postscript

(Excerpts from a letter by Dr. Lee R. Hougan, Chief, Health/ Humanitarian Assistance, USAID/Bolivia, October 31, 1980.)

May and June 1980 registered significant gains for RHDS project: the final conditions precedent for loan disbursement were due to be submitted July 18th, the day after the coup; the RFP had been submitted to Washington for the long term technical assistance teams; and perhaps most important, the project was shifting from the planning to the implementation phase, acquiring commitment from a wide range of people from various government departments.

In the aftermath of the coup, there have been significant and very deep changes. The U.S. Government immediately suspended relations with the Bolivian Government, and all contact with Bolivian counterparts was also suspended pending further developments. All projects were examined on a case by case basis to determine which ones could be most easily cut in protest to the military take over. The first to go was the RHDS project: the unfilled conditions precedent provided the legal basis for immediately cancelling the project. Funds (\$13,300,000) have now been deobligated as well.

Should the U.S. reestablish relationships with the Bolivian Government, the RHDS would certainly be reconsidered; it is a priority with the Bolivians and the mission. A new project paper would be drafted, simplifying the project and its conditions precedent somewhat, but much time would be saved towards its implementation as considerable planning has already been done and the RFP prepared. Time would be needed, however, in orienting a whole new group of people to the project.

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John Massey, LAC/DR/HN, project manager for Bolivia, 6/5/80 & 6/23/80.

Nancy Ruther, former project manager and member of design team, USAID/Bolivia (by telephone), 6/6/80.

Carlos Tobon, former chief project advisor in Santa Cruz, Bolivia, 6/18/80.

DOMINICAN REPUBLIC

IDENTIFICATION

Project Name and Number: Health Sector Loan I: Number 517-0107  
Health Sector Loan II: Number 517-0120

Location: Nationwide

Project Dates: FY 1975 - FY 1981

Funding Level and Sources: Loan I: AID: \$4.8 million  
GODR: \$6.9 million  
Loan II: AID: \$8.0 million  
GODR: \$2.1 million  
Communities: \$1.1 million

Responsible Offices: Health Officer, USAID/Dominican Republic  
  
Bureau for Latin America and the Caribbean, Office of Development Resources, Health and Nutrition Division, AID/Washington

Contractors: Several personal service contractors have provided services in such areas as nutrition, statistics, evaluation, management, and mass media education.

Implementing Agency: Ministry of Health and Social Welfare (SESPAS)

## COUNTRY STATISTICS

Total Population: 5.4 million

Rural Population: 49%

Infant Mortality Rate: 96

Population Growth Rate: 2.8%

Life Expectancy at Birth: 60

GNP Per Capita: \$910

Adult Literacy Rate: 67%

## SYNOPSIS

Since 1975 USAID has supported the Dominican Republic's efforts to create a rural health delivery system that makes basic health services available in communities of 400 - 2,000 inhabitants. The Basic Health Service system that was established relies heavily on village-level health promoters delivering services in people's homes. Available sources have not yet yielded a clear picture of just how effective the system is in improving the population's health status.

## BACKGROUND

In 1973 the Secretariat of Health/DR and USAID/DR initiated a national health sector assessment. This study reported high rates of infant and child mortality, diarrhea, malnutrition, and population growth and recommended solutions to these problems. After reviewing the report, the Government of the Dominican Republic (GODR) negotiated Health Sector Loan I with USAID/DR in 1975. In 1978, they signed Health Sector Loan II, which continued and expanded activities initiated under the first loan. An important part of these loans went to create and support a Basic Health Services (SBS) scheme to bring primary health care services to the large number of unserved citizens.

Before SBS services were provided, only a limited number of rural clinics and hospitals administered by the SESPAS, universities, and private organizations offered health services. As noted in the health sector assessment, however, these services were underutilized by most of the people, in part due to their poor quality.

The SBS was conceived in response to this finding. The system uses indigenous auxiliary health workers, called promotores (promoters) to deliver bimonthly health, nutrition, and family planning services to individual community homes. The major innovation of the SBS was bringing services to the people's homes rather than waiting for the ill to show up at fixed facilities.



## PROJECT DESCRIPTION

The goals of the first loan are to reduce infant and preschool mortality by 15 percent in three years and to reduce the crude birth rate by 15 percent in five years. These goals were to be met by improving government's capacity to deliver health services. Health Loan II includes the following specific components:

1. Potable water systems and latrines will be constructed in SBS villages to improve environmental sanitation. Villagers will be taught how to maintain and use these facilities.
2. To improve service coverage, the SBS system will be expanded to 100 communities already served by rural clinics.
3. 100 rural clinics and 20 small hospitals will be upgraded to ensure that the patients referred to these institutions by SBS promoters can receive adequate care.

Promoters, who are community residents and usually women, are part-time government workers. Their salaries are a substantial supplement to their family incomes. Promoters give vaccines and deliver other appropriate services bimonthly. Families must go to the promoters or to the clinic to be treated for illnesses that occur in the interim.

Promoters visit each house under their jurisdiction (between 70-80 houses) twice a month and keep records of such visits. During these visits they distribute aspirin, cough medicine and anti-diarrhetic as needed and provide orientation to the family on nutrition, preparation and utilization of oral rehydration fluids, distribution of condoms and contraceptive pills, referrals for IUD insertion and female sterilization services, and referral of patients to the nearest rural clinic or hospital. They maintain a record for every family under their supervision, including information on vaccines and progress notes on their visits.

The initiation of new SBS activities has been reported in several quarterly reports. Among the new activities are nutritional surveillance of all children under 5 years of age (weight, height and arm circumference), and planting home gardens.

The Office of Nutrition Coordination, in the Secretariat of Health, was created under the nutrition component of Loan I. It has initiated the following activities to support the SBS program:

- . one week training courses in nutrition for promoters;
- . production of nutrition education materials for promoters;

- . establishment of nutrition recuperation centers for malnourished children which, are used also as demonstration centers for promoters; and
- . production of a mass media program, developed with the assistance of a U.S. consultant.

Besides supporting training, loan funds have been used to purchase various means of transportation (e.g., jeeps, motorcycles, mules) for supervision and drug distribution. A cold chain of gas and kerosene refrigerators and thermoses for promoters has also been established with loan funds.

The specific outputs and current status of SBS components (Loan I and Loan II) are listed in Tables 1 and 2.

CURRENT PROJECT STATUS

Loan I

<u>OUTPUTS</u>	<u>STATUS</u>
1. Services provided in 5 regions.	1. Completed 3/79.
2. Target populations of 1,573,000 rural and 240,000 urban served.	2. Services available to 1.8 million rural people; urban services discontinued.
3. 4,500 promoters trained.	3. 4,700 trained by 6/80.
4. Immunizations:	4. Coverage:
. Two doses of DPT given to 75% of children 1-9.	. 42.6% in 1977; 68.6% in 1978.
. One dose of measles given to 75% of children 1-9.	. 24.9% in 1977; 46.9% in 1978.
. Two doses of tetanus to 80% of women 15-49.	. 33.7% in 1977; 56.0% in 1978.
5. Contraceptives distributed to 4.8% of women 15-49.	5. 5.8% in 1977; 14.3% in 1978.

No quantitative information is available on the status of the following planned outputs: family visits and the distribution of aspirin and cough medicine; nutrition education; oral rehydration of children with diarrhea; arm circumference measurements of all children under 5; referral services to clinics; referrals to nutritional recuperation centers; and maintaining family health records.

## Loan II

<u>OUTPUTS</u>	<u>STATUS</u>
1. Expanding SBS system to another 200,000 people.	1. All activities starting in 1980.
2. Installing potable water systems to serve 160,000 people through 2,250 water systems outlets.	2. Drilling of wells, manufacturing, and installation of pumps underway.
3. Constructing 22,500 latrines.	3. Bids will be opened February 2, 1981.
4. Training 350 health promoters and 100 health educators.	4. Training being developed.
5. Instructing 300,000 villagers in appropriate use and maintenance of latrines and water systems.	5. Orientation of communities initiated.

### IMPLEMENTATION EXPERIENCE

Despite initial delays in Loan I, the program has expanded to each of the five originally targeted regions (as well as one additional region), and nearly 4,700 promoters have been trained. From the beginning the program has had the support of key health officials. Presidential support for the health program, although initially weak, has increased since the new administration took office in 1978. The health budget has been increased, and timely and adequate GODR monthly payments to support the loan are being made. The GODR had already disbursed its \$6.9 million counterpart contributions by January 1980.

Interim evaluations of service delivery were conducted in 1977 and 1978, and a final evaluation began in 1980. Inadequate recording and reporting resulted in the use of sample surveys for evaluation rather than continuous monitoring of program status. The 1977 evaluators concluded that more immunization and family planning services are being delivered in program areas than in non-program areas. Although project targets were not met, a comparison of 1977 and 1978 figures shows a marked improvement in immunization coverage in the program areas (see chart on p. 34).

As part of the 1980 final evaluation, a 10% sample (460) of the 4,600 promoters was taken to study the records of their activities. These data, although not yet available, are expected to indicate not only the percentage of the population receiving immunization, but also the impact of the program on infant mortality.

The portion of the program that has not progressed well is that of administrative support. According to several sources, this component was neither desired nor understood by the Dominicans. Furthermore, the participant in the 1980 evaluation felt that the planned support systems were too sophisticated and emphasized procedures with little attention to their context.

As originally envisioned, the SBS program was to cover both urban and rural areas. However, after two years of operation, support for urban area activities was withdrawn. The project was terminated because SBS duplicated the services of non-government organizations and the turnover of urban promoters was high because of their mobility.

In rural areas, however, much progress has been made. Each participating community's health committee selects its promoter who is trained for 3 weeks on simple prenatal care, hygiene, treatment of respiratory illnesses, use of aspirin, immunizations, family planning, and preparation of oral rehydration fluid, and for an additional week on nutrition. A low turnover rate among rural promoters is attributable to financial as well as social incentives. The promoters are paid a government salary of \$30 per month for working 3-4 hours a day. The promoter's high commitment to the SBS program and community receptiveness to their services have been noted in interim evaluations. Program evaluators, however, have felt that promoters would benefit greatly from improved supervision, refresher courses and more focused job tasks.

A recent study of 48 promoters showed considerable variation in the performance of workers in delivering immunizations and family planning services, their two primary functions. Analysis of the characteristics affecting their performance indicated that job satisfaction was the only major difference among the effective and less effective workers. Sex, which has been a subject of concern, made little difference, and male workers were as effective as females in delivering family planning services. The study indicated the key role that community support and satisfaction with pay can play in a PHC program.

Until recently, all promoters have been supervised by auxiliary nurses who are recruited from and stationed in urban areas. This was not satisfactory as auxiliaries trained in the cities had a curative orientation and did not adapt to either life in the

rural areas or to having promoters giving immunizations. Under Loan II, health educators from rural area are being recruited to supervise promoters, and the SBS system is being integrated into the Health Education Division of the SESPAS. In addition, the new supervisors are responsible for organizing their communities to construct potable water systems and for teaching health education.

Local health committees are organized to select as well as oversee their promoters. Community involvement in health activities should increase during the Loan II phase, since the community will be responsible for partial funding and maintenance of potable water systems and latrines.

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EL SALVADOR

IDENTIFICATION

Project Name and Number:	Rural Health Aides, Number 519-0179
Location:	National
Project Dates:	1978 - 1981
Funding Level and Sources:	AID grant: \$652,000 Government of El Salvador(GOES): \$954,000
Responsible Offices:	Health Officer, USAID/El Salvador  Bureau for Latin America and the Caribbean, Office of Development Resources, Health and Nutrition Division, AID/Washington
Contractors:	None
Implementing Agency:	Ministry of Health, Division of Maternal and Family Planning

## COUNTRY STATISTICS

Total Population: 4.8 million

Rural Population: 59%

Infant Mortality Rate: 51

Population Growth Rate: 3.3%

Life Expectancy at Birth: 63

GNP Per Capita: \$660

Adult Literacy Rate: 62%

### SYNOPSIS

Low utilization of government health services in rural areas led to a new approach using rural paraprofessionals (Rural Health Aides). This AID project supports training for the aides, whose activities include primary health care, nutrition and family planning. The aides trained to date have been effective in increasing referrals to other GOES health facilities and in increasing use of contraceptives. A promising beginning has been made, though its continuation is subject to disruption by current political and social turmoil.

### BACKGROUND

Poverty is widespread in El Salvador. On the basis of a 1977 USAID-calculated poverty line of \$250 per capita per year, over 83% of rural people are poor.

More than 70% of rural children are malnourished; gastroenteritis and respiratory disease run rampant, accounting for a large percentage of infant and child mortality; 60% of births are unattended; and maternal mortality is estimated at 240/100,000 in many rural areas.

A population density of 214 per square kilometer (the highest in continental Latin America) and very high natural growth rate place extreme pressure on social services and economic resources. The problems have been compounded by increasing political turmoil.

The current civilian-military junta has proposed fundamental reforms to improve conditions for the rural and urban poor. The national health plan is being revised, and the new plan is expected to emphasize an integrated approach to health care. Integration of the Ministry of Health (MOH) and social security health systems has been discussed, as has extension of social security to the rural areas (the present system covers only about 4% of the population). To date, there is no indication that any decision has been made. In the interim, the MOH has promised continued support for ongoing efforts to extend health education, nutrition, family planning and basic health services to the rural population—the current Rural



Penetration Program was designed to greatly increase service delivery after the 1976 MOH health sector assessment pointed out health coverage deficiencies.

Efforts to extend coverage to rural areas include the Rural Health Aide (RHA) project, begun as a pilot effort in 1976 under the Population and Family Planning project to increase family planning outreach. The concept was broadened to include primary health and nutrition services as well after a 1977 MOH evaluation demonstrated the feasibility of the RHA approach on a limited scale. Under this approach, 140 RHAs and 10 supervisors were trained.

In order to institutionalize the concept of community-level health workers—a crucial step in the development of an effective integrated rural health delivery system—AID decided to undertake the current project as a distinct entity separate from the population program, although about one quarter of the project's funding is from population.

Commitment to the RHA approach to primary health care for the rural population appears strong. A large-scale AID rural and urban health improvement loan for maintaining and strengthening the RHA system is now under discussion. Other international donors have provided complementary support: the Inter-American Development Bank (IDB) has made two loans for construction and renovation of community health facilities and has provided technical assistance in logistics, maintenance and development of management information systems for the MOH. WBO/PAHO is providing funds for training supervisors for the RHA program.

#### PROJECT DESCRIPTION

The project purpose is to extend, improve and integrate health, nutrition and family planning services for the rural poor by developing, expanding and improving the community-based RHA system.

The major outputs include training, deployment, and support of 412 new RHAs and 99 supervisor/evaluators; provision of supplies, equipment and materials for new RHAs; yearly refresher courses for all previously trained RHAs and supervisors; and development of an information management system by the MOH to improve program operations and evaluation.

The RHA program represents the MOH's first use of paraprofessional health workers. It was developed to deliver basic health and information services to the rural population, whose contact rates with official health services averaged only 0.2 per person per year, despite the existence of 249 widely dispersed MOH health facilities. The RHA is the formal link between the community and the MOH health facilities and is expected to improve utilization

rates through referrals.

The 412 new REAs trained under this project are to provide services to approximately 41,200 rural families (each aide should visit at least 100 families per month). Since an average family has seven members, the aided aides should serve nearly 300,000 people. Priority in assigning REA's is given to the poorest, most isolated communities.

REAs are selected by regional MOH personnel in consultation with the communities to which the REAs will return to work. They must be acceptable to the community, between 18-40 years of age, have completed 6th grade, be in good health and be capable of passing required training examinations. REAs may be of either sex. Training consists of ten weeks of intensive competency-based instruction, held near each of the four regional capitals, using the curriculum developed and revised during the pilot project. Two-week refresher courses are given yearly.

REA activities include health promotion, basic curative care and administration. As promoters, they are expected to encourage family planning through education and provision of oral contraceptives (OCs)\* and condoms, promote pre- and postnatal care, inscribe children in well-child programs and promote good nutrition and personal hygiene, accident prevention and environmental sanitation. Curative care includes treatment of diarrhea without vomiting and referral for serious diarrhea; treatment of parasitic disease, eye infections, muscular aches, mild headaches, and minor injuries; first aid; immunization and medically prescribed injections; and recognition and referral of more serious health problems. Administrative duties include registering births and deaths, conducting a population census, maintaining records of activities, planning work activities and supply control.

The initial supervisory system developed for the REA program was unusual because it utilized field evaluators from the MOH malaria control division. The MOH found them to be the best available manpower at the time. Selection criteria were similar to those for REAs except that a 9th grade education was required.

The malaria evaluator responsible for the community for which a REA was being trained received a one week REA program orientation, then took the ten week REA course in his region, followed by a one week supervisory course given regionally by the National Health Training School.

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\*The MOH recently changed its long standing policy requiring medical prescription of OCs. REAs can now provide initial OCs with the guidance of a diagnostic checklist.

The malaria evaluator then became the basic supervisor, augmented by technical assistance and referral services provided by MCH personnel stationed in the four regions. This system is now being changed, and the malaria evaluators are gradually being replaced by assistant nurses and sanitarians specially trained in a 3 to 4 week supervision course.

RHA program coordinators have been named from existing personnel in each region to oversee the program. Monthly meetings of all basic supervisors are held at the regional level and attended by chiefs of the regional malaria and RHA programs to ensure coordination.

Ninety-nine new supervisors are to be trained under this project. Planning documents state that by the end of the project 640 RHAs will be supervised by 156 retrained malaria evaluators, assistant nurses or sanitarians, a ratio of 4.1/1.

Both the RHAs and supervisors are paid by the MOH and enjoy benefits accorded all government employees. RHA salaries were to be supplemented by sale of contraceptives at modest prices, but this was not put into effect. The RHAs currently charge only for injections. All other services are provided without charge.

Besides training personnel, the project originally included technical assistance to improve the collection and use of information within the RHA program for operational decision making and program evaluation.

The AID grant of \$652,000 provides temporary salary support and benefits for new RHAs, training, technical assistance, medical and educational materials and equipment.

Evaluations of this project were made by the MOH with AID technical assistance in 1977, 1978 and 1979. A PES scheduled for October 1979 has been postponed.

#### IMPLEMENTATION EXPERIENCE

Completion of this project was originally scheduled for early 1980; it has been rescheduled for early 1981, and due to the civil unrest, may be extended another year. RHA training was halted for over a year because the MOH was unable to absorb salary costs for additional personnel. Costs have now been absorbed for all RHAs and supervisors and training of new personnel is due to start within the next 2 to 3 months, barring further deterioration of the political and economic situation in El Salvador.

CURRENT PROJECT STATUS

<u>OUTPUTS</u>	<u>STATUS (1979)</u>
1. 412 new REAs trained.	1. 118 trained.
2. 99 additional supervisors trained.	2. 42 trained.*
3. Health coverage extended to 41,200 additional rural families.	3. 11,800 families.
4. Information management/evaluation plan adopted by MOH.	4. Dropped from project--to be assisted under new project in coordination with IDB.

\*12 malaria evaluators (original system) and 30 assistant nurse/sanitaricians under revised supervision system.

A MOH evaluation concluded that RHA training was reasonably adequate. Seventy-two percent of clinic personnel considered the REAs knowledge adequate and 79 percent felt their practical ability to be adequate, though they suggested more training. REAs themselves have indicated a need for further training, especially in the area of family planning.

The program seems to be well accepted by the communities. The 1979 MOH evaluation indicated that all the REAs surveyed felt they were accepted by and useful to their communities; and the concurrent community survey indicated that 84.4% of those surveyed saw the REAs as helpful, primarily because of their curative functions.

A 1978 survey on RHA's time utilization indicated that REAs in the Eastern Region dedicated 32% of their time to curative activities, 24% to preventative activities, and 44% to health education. An early pilot project stressing only promotion and prevention failed--it was found necessary to add curative functions to gain credibility for the aides.

As of January 1980, there were 308 funded RHA positions, 265 of which were filled. Thirty-six REAs had resigned and another seven had been killed in political violence. Having been selected by local political figures REAs are a particular target of the leftist guerillas. The government is attempting to transfer many REAs to more tranquil areas of the country.

Reliance upon traditional medicine and healers is rapidly losing ground to modern medicine, even in isolated areas. Treatment by trained health providers is sought if they are

accessible and if the person seeking help is treated with understanding and sympathy (lack of such treatment has been a strong factor discouraging return visits to many health facilities).

There are problems in effectively reaching women. A pre-project anthropological study showed that although women are the greatest users of health services, they are less satisfied with available health services than men and have more reservations about diagnostic competence. They also have less faith in preventive medicine, and tend to see their children as healthier than do their husbands or companions. The 1979 evaluation indicates a community preference for female RHAs (32.1%) to males (15%), and shows that female are more effective in getting women to accept referrals for themselves and their children. Currently only about one third of RHAs are female, partly because of difficulty in recruiting more women. More effort could be made to recruit women in view of community preferences and a largely female clientele.

The 1979 evaluation indicated that RHA job satisfaction is high; turnover has been low, although it is increasing as political unrest grows, for reasons of safety. Career advancement is difficult for RHAs because of rigid educational requirements for higher positions.

There is evidence that the RHAs are growing increasingly effective in linking rural families with other MOH health services. The MOH 1979 evaluation showed that almost 60% of those referred to clinics by RHAs actually went, with the greatest number of referrals being for child care. Clinic personnel (40%) indicate that demand for clinic services has increased, while 42% indicate that the RHAs should do more. Referrals increased from 4% of cases for the first group of RHAs to 17% for 1977 trainees. It is interesting to note that the most significant variable in referral rates was the RHAs' perception of adequacy of service at the health facility and prior client satisfaction.

Impact of the RHA project is indicated not only by the increase in referrals for well-baby checkups, vaccination, and post-natal checkups but also for family planning services. A 1979 contraceptive prevalence survey indicated an increase in cantons served by RHAs from 4.2% in 1976-77 to 17.7% in 1979. The 1979 evaluation shows that 71.5% of women using a contraceptive method obtained their information from the RHA.

The RHA program has undergone changes since its inception, due to internal and external factors. Perhaps most importantly, the scope of the program has been reduced because of economic limitations. The MOH will be able to absorb only about half of the 1,550 RHAs originally programed for 1982. Training will continue

under the current grant, and will also be supported by the follow-on loan (if it is approved) to the level of absorptive capacity. The current arrangement is that the AID grant pays salaries and benefits until the next GOES fiscal year (which begins in January), when they are picked up by the MOH budget. The MOH was unable to pick up the last class of REAs on schedule and was granted an extension.

Discussion is occurring on alternative financing of REA salaries to reduce the financial burden on the MOH, including community financing through cooperatives and private-sector associations. Indications are that the program will be tied closely to the agrarian reform effort; REAs will soon be assigned to the agrarian reform areas and perhaps partially supported by peasant cooperatives.

As mentioned previously, the supervision system has changed and new supervisors are being trained to replace the malaria evaluators. This change was due principally to an increase in malaria incidence that required more time from the evaluators, making it harder for them to supervise REAs. It also became evident that the supervision system was deficient in providing needed technical support, since the evaluators' level of knowledge was no greater than that of the REAs. There were also some problems with style of supervision—the malaria program is vertical, with an almost military discipline. There tended to be more emphasis on complying with requirements than on helping the REA do a better job.

Community participation has been low—community input has only been sought in selection of REAs and evaluation surveys. There is some indication that efforts are being made to increase community involvement through increased promotional activity and coordination with DIDECC, the government community development agency.

Lack of adequate logistical support has caused some difficulties. Some changes have been made in the payment system for REAs to overcome delays and inconvenience. Logistic and administrative problems have stemmed from division of responsibility for the project between the Maternal/Child Health Division of the MOH and the Operations Division, which is in charge of the regional offices and health facilities. There is no central-level focal point for the REA program which can fully coordinate activities. According to the 1979 evaluation, responsibility was to have been transferred from MCH to the Operations Division, but because of lack of personnel, MCH has continued its technical and administrative responsibility for the program.

Assistance in improving logistic support and a management information system (which was deleted from this project) is to be provided under the proposed follow-on loan as well as by IDB.

It appears that the Rural Health Aide concept has made a good beginning in El Salvador. Further progress is likely, assuming no radical political or economic changes. But political turmoil is growing and there is evidence that it is seriously affecting the health care system. Health providers are forbidden to treat wounded "subversives," doctors and other health workers have been killed, and health facilities have been raided. This situation makes it increasingly difficult for a health care system to function at all, let alone grow and flourish.

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Summer 1981

GUATEMALA

IDENTIFICATION

Project Name and Number: Rural Health Services Program, supported by Health Sector Loan I, Number 520-L-202, and Health Sector Loan II, Number 520-L-021

Location: Nationwide

Project Dates: Loan I, FY 1971-1975; Loan II, FY 1973-1977 (extended to FY 1979).

Funding Level and Sources:

Loan I: AID	\$2.5 million
Government of Guatemala:	\$3.5 million
Loan II: AID	\$3.4 million
GOG	\$1.6 million*

Responsible Offices: Health Officer, USAID/Guatemala  
Bureau for Latin America and the Caribbean, Office of Development Resources, Health and Nutrition Division, AID/Washington

Implementing Agency: Ministry of Health

COUNTRY STATISTICS

Total Population: 7.0 million

Rural Population: <u>61 %</u>	Infant Mortality Rate: <u>76</u>
Population Growth Rate: <u>3.1%</u>	Life Expectancy at Birth: <u>57</u>
GNP Per Capita: <u>\$910</u>	Adult Literacy Rate: <u>47%</u> (40-rural; 82-urban)

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\*Actual expenditure is approximately \$10 million, 1971-1979

## SYNOPSIS

Under several rural health programs, a number of steps have been taken in Guatemala during the past ten years to establish a nationwide primary health care system. Though the government has yet to approve any single PHC model, much experimentation and building of human infrastructure has taken place.

## BACKGROUND

Guatemala is the largest and most populous country in Central America. Most of the population live in rural areas and are Indian, separated from the predominately Latino (of mixed Spanish-Indian descent) urban and town dwellers by language, culture, and geography.

The health problems of Guatemala are similar to those in other developing countries, the most common being malnutrition, infectious diseases and infant mortality. These problems are endemic to the large and dispersed rural population, due to poor economic conditions, a critical shortage of medical manpower and the concentration of resources in the urban areas. Although 64% of the Guatemalan population is rural, 80% of doctors live and work in Guatemala City. Available health services are mostly curative, and responsibility for delivering services is divided inefficiently between a weak Ministry of Public Health (MOH) and a Social Security Institute that serves only a small portion of the population.

Since the late sixties, the Government has tried to build up a Rural Health Services Program—a sharp departure from the prevailing clinical health care delivery systems of urban hospitals and district health centers. The Rural Health Service is clearly designed (1) to prevent disease and malnutrition among the isolated rural population, and (2) to correct the imbalance in the location of health personnel. Limited resources, professional reluctance, and deficient central planning have, however, been serious constraints.

USAID has been a major supporter of the establishment and expansion of the rural health program, beginning with a mission-sponsored health sector assessment in 1971. The government's rural health program was designed in accordance with the health assessment recommendations and a MOH health delivery system analysis/feasibility study, and adapted from the Duke University physician's assistant model. In addition, the AID mission has made preventive services and the integration of family planning the major requirements for U.S. assistance. This is the context for four major AID-sponsored primary health care initiatives.

Health Sector Loans I and II were jointly planned and implemented from 1971-79 to strengthen the national infrastructure.

Subsequent primary health activities have included two centrally-funded (AID/PCP) grants for regional experiments with community-based health systems—the Rural Health Promoter Training Research Project (PRINAPS, 1979-82) and the Integrated System of Nutrition and Primary Health Care (SINAPS, 1979-81)—and a major new regional effort, the Community-Based Integrated Health and Nutrition Loan (1980-83). Taken together, these activities cover almost all primary health care fronts—facilities, manpower planning and training, communications, information collection, logistics, drug supply, transportation, and environmental improvements. Individually, they illustrate a common difficulty facing primary health care planners, the inadequacy of such "bricks and mortar" approaches without a strong government policy of and commitment to integration and decentralization. Each of the four projects will be considered separately.

### PROJECT DESCRIPTION

Loans I and II, designed and implemented jointly, were the first funds made available to the GOG to develop the Rural Health Services Program. Their objective was "to assist in the improvement of the health care delivery system." Under the agreements, facilities were built, and the personnel needed to operate the program were trained. Specifically, Loan I provided funds to build or refurbish health posts, establish a training facility, and design a curriculum for the rural health technicians (TSRs); and Loan II, to increase the number of auxiliary nurses and renovate hospitals.

The government's plan for a rural health service is described in the 1971 health sector assessment. Delivery of services is planned through a four-tiered referral system linking the existing curative system to the new public health services being extended into rural areas. The four tiers of the system are:

- I. National and regional hospitals staffed by physicians and nurses (Medical Care Team);
- II. Health centers located in the larger towns of districts which are staffed by physicians, nurses and occasionally auxiliary nurses (Basic Public Health Team);
- III. Health posts covering 6-10 villages, staffed by auxiliary nurses and rural health technicians (TSRs), a new category of health worker created under this program. (The TSR provides preventive, promotive and limited curative out-reach services in the villages. The auxiliary nurse is stationed in the health post and provides curative services.)

- IV. Village services offered by another new category of health worker, the promoter. Promoters are volunteers, chosen by village health committees. Under the supervision of TSRs, they provide preventive and limited curative health services, refer the sick to the nearest health post, and initiate and guide community health activities.

#### IMPLEMENTATION EXPERIENCE

The following tables list Loan I and Loan II targets and accomplishments as described in the 1979 final loan evaluation. Many outputs were changed from loan to loan for bookkeeping reasons; such changes in outputs have been noted under "current status." Most planned facilities were completed by the time the project ended, March, 1980. Incomplete activities will be financed by GOG funds - completing renovation of a hospital and the Jutiapa auxiliary nurse school, and installing 4 boilers in the hospitals.

#### CURRENT PROJECT STATUS\*

<u>OUTPUTS</u>	<u>STATUS</u>
<u>Loan I</u>	
1. Renovation and equipping of Quirigua Training Institute TSRs.	1. Phase I completed.
2. Maintenance training.	2. 65 persons trained by 1977.
3. Equipping of 20 rural hospitals.	3. 3 hospitals fully equipped, 12 partially equipped.
4. Equipping of 161 health posts.	4. Completed.
5. Training of 320 TSRs.	5. 269 graduated by 1979.
6. Training of 160 auxiliary nurses.	6. 110 graduated.
7. 357 motorcycles purchased.	7. 25 ambulances purchased since GOG bought Japanese motorcycles instead.
<u>Loan II</u>	
1. Renovation of 20 rural hospitals.	1. Reduced to 8, 7 of which have been completed.

\* Source: Project Evaluation Summary Part I and II for Rural Health Service I and II - Loans 520-L-020 and 520-L021, February 28, 1979.

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| 2. Design radio communications network.                        | 2. Design completed but deleted due to costs.  |
| 3. Construction of auxiliary nurse training school in Jutiapa. | 3. Completed.  |
| 4. Equipment for University of San Carlos Dental School.       | 4. Deleted from Loan at request GOG.   |
| 5. 20 jeeps for supervisors.                                   | 5. Purchased.  |
| 6. Health planning strengthened.                               | 6. 3 staff members and technical assistance provided to National Economics Planning Council. |
| 7. Renovation and equipping of Quirigua.                       | 7. Phase I and II completed.   |

Support for and commitment to developing the Rural Health Service Program have evolved only gradually since the initiation of Health Sector Loans I and II. Concurrent with the development of institutions and manpower under Loans I and II, the Government of Guatemala was to institute the Rural Health Services Program as described in the 1971 health sector assessment. However, by 1979, the rural health system was not yet adequately functioning, although the construction of facilities and manpower training under the Loan I and II agreements had been completed. A 1977 Health Assessment showed little change: 65-70% of the population still lacked access to modern health care.

The slow progress has been attributed to various factors, including:

- competition and lack of coordination between the Social Security Institute and the Ministry of Public Health;
- opposition to the use of paraprofessionals by medical professionals;
- inadequate project planning (Loan I did not have an implementation plan);
- absence of a MOH administrative unit specifically responsible for the development and delivery of rural health services;
- changes in personnel;
- inadequate budgetary and policy support for the program;

- the 1976 earthquake which deflected attention and resources;
- the 1978 election; and
- long contract procedures and slow deliveries

### Facilities

Although the system is not operating as planned, significant gains in building physical infrastructure have been made over the past 10 years. For instance, in 1969 there were almost no health centers or health posts, while in 1979 there were 159 health posts. Nevertheless, serious problems have developed. Legal questions were raised about the purchase of many of the buildings. New posts were built while older ones needing renovation were overlooked. As a result, supplying and staffing of the posts has been inadequate.

### Paraprofessionals

The percentage of health professionals stationed outside of the capital area has been growing (from 31% in 1974 to 56% in 1979). Most importantly, paraprofessionals are now widely accepted, and the training schools are in a position to produce a large number of qualified health workers. The TSRs, in particular, have become a valuable resource in rural areas.

The TSR is a crucial link between the health post and the village. After completing a two-year training course, the TSR should be well prepared to deliver public health services and to initiate community health activities. A recent AID-sponsored study notes that TSRs are well accepted by their communities and provide valuable support and supervision to promoters.

However, for the most part, TSRs are not well integrated into the national health delivery system. Because TSRs are trained in a variety of skills, ranging from simple curative services to environmental sanitation, the established health professionals and technicians allow them no place in the well-defined manpower hierarchy. A recent decision to require rural service from medical interns may put the TSRs in an even more awkward position. As long as TSRs are not integrated into the health system and are not accepted by other health workers, effective job placement and adequate supervision will continue to be problems. Only recently have some TSRs systemically been incorporated into community health programs, through the three subsequent AID-funded projects.

### Financial Aspects

The government's budgetary allocation to rural health has also been growing. Almost 100% of new health sector capital investment has been made in rural areas since the mid-seventies. Rural health

care now takes up 62% of the health sector budget. The strain these loans have put on the GOG budget must, however, also be considered. The operating costs required to run the training schools have run five times what was budgeted. Increased costs, as a result of delays and the earthquake, have required a much larger counterpart contribution; one source estimated that GOG costs ran as high as 100% over projected costs.

#### Other Lessons

Two major lessons for planning may be drawn from the project. First, using a separate implementation agency made it very difficult to coordinate with other government bodies, especially for procurement. Secondly, duplication of effort occurs unless coordination with other donor agencies is emphasized.

All in all, however, the project can claim a large number of achievements, although future efforts requiring considerable commitment must be made to tie them together. As a 1979 PES summed up in the final lessons learned, "most of the constraints on improving the GOG's rural health delivery system could be addressed by policy changes and not by a 'bricks and mortar' approach, as was Loan 020/021."

A Community-Based Health and Nutrition Systems Loan was designed in 1977 to build upon the achievements of Health Sector Loans I and II — the production of TSRs and the wide distribution of health posts. Through this loan (\$5.5 million for materials, training, equipment, and construction) and an associated grant (\$1.1 million for technical assistance), the community health post network in three departments of western Guatemala will be strengthened. This assistance is also directed at developing both the MCH's management capability and its capacity to support community-based health activities through new logistical, supervisory, and information systems. This loan/grant package has been postponed in order to benefit from the information of a mission-sponsored health sector assessment begun in 1977. The recent escalation of rural violence has further delayed project implementation.

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### Interviews:

Dr. James Heiby, DS/POP, AID/W.

John Massey, LAC/DR/EN, AID/W.



GUATEMALA

IDENTIFICATION

Project Name and Number: Rural Health Promoter Training Research Project (PRINAPS), Number 932-0632

Location: Five areas in western Guatemala (93,000 people)

Project Dates: Sept. 1979 - March 1982 (delayed six months, may be extended)

Funding Level: AID: \$379,000

Responsible Offices: USAID/Office of Population

Implementing Agency: Ministry of Health, Division of Human Resources

COUNTRY STATISTICS

Total Population: 7.0 million

Rural Population: <u>61%</u>	Infant Mortality Rate: <u>76</u>
Population Growth Rate: <u>3.1%</u>	Life Expectancy at Birth: <u>57</u>
GNP Per Capita: <u>\$910</u>	Adult Literacy Rate: <u>47%</u> (40-rural; 82-urban)

SYNOPSIS

This centrally funded project supports the MOH's Division of Human Resources in training 400 new promoters, while testing a number of training and service delivery innovations. Over 200 promoters have been trained, but no information is yet available on research findings.

BACKGROUND

In 1978, the Government of Guatemala appealed to USAID for support for continued promoter training after a UNICEF training effort had ended. Through the efforts of UNICEF and a large number of private organizations, an estimated 3,000 promoters had been trained, but there was little uniformity in their training, and only a small percentage of promoters had been integrated into the Rural Health Services Program.

Little information is available on the selection, training and performance of these promoters. Available documents suggest that there is little uniformity in either the promoters' activities or performance. A 1980 study made the following recommendations for increasing the effectiveness of government promoters:

- increased supervision of promoters by TSRs to control, encourage, and guide promoters and to improve their status in the village and job performance;
- availability of funds which promoters can use to stimulate and implement public health activities;
- cooperation between employees of different ministries that have representatives in villages (i.e. Defense and Education);
- incentives to reduce the high turnover rate of promoters;
- selection of promoters by communities to increase community knowledge of and interest and confidence in their health promoters; and
- appropriate and timely training and retraining of promoters.

#### PROJECT DESCRIPTION

This centrally-funded project provides \$379,000 to the MOH's Division of Human Resources to train 400 new promoters, while testing a number of training and service delivery innovations in response to problems with utilizing promoters. It will provide another possible model for the MOH's expansion of rural health care by being primarily health post centered, taking less of an outreach approach than SINAPS.

The project plans operational research in the following areas:

- promoter training by traditional 4 week instruction will be compared to training by a shorter (3 week) self-programmed manual;
- the performance of male-female family pairs as promoters will be compared to promoters working alone;
- a new supply kit will include a larger variety of simple drugs than the conventional UNICEF kit: oral rehydration mixture, vitamins, aspirin, piperazine, mebendazole, oral contraceptives, condoms, vaginal contraceptives, arm

circumference bands, gauze, gentian violet, adhesive tape, 2 hypodermic needles, soap, and a thermometer;

- a new supervisory system will be developed, utilizing TSRs given a special 5-day training course. The TSRs will use supply lists as well as sample visits to community members to evaluate the promoters' performance;
- a self-sustaining logistics supply system will be tried utilizing municipal pharmacies, which will use a 30% mark-up to purchase new supplies;
- a new information system will be developed;
- vehicle maintenance needs will be compared for project-owned vehicles and project-subsidized vehicles.

To evaluate program impact, a household food consumption survey will be conducted and an anthropologist will observe communities. Promoter performance, the community pharmacy, training, and transportation will also be evaluated.

#### IMPLEMENTATION EXPERIENCE

As of April, 1981, 205 Rural Health Promoters had finished the traditional training and 170 had completed the modular self-instructional training. At least three-quarters of the partnerships had been established. A baseline survey has been completed of 2,000 households, undertaken by the TSRs, as has an anthropological study of the control village. Eleven of the sixteen pharmacies have been set up although the final five are necessary for economic drug purchasing.

A consultant's report of April, 1981 brings to light a number of issues. Once again, the MDH's commitment to special programs, especially research programs, appears to be small. Program operations have remained "a one-man show," although there is a clear need for assistance. Other administrative headaches - file systems, travel expenses, etc. - also seem to be worsened by lack of ministerial support.

Fewer problems are apparent with the separating of research and service elements of PRINAPS. However, because the project was intentionally designed to be decentralized so that it would better fit into the government's rural services, some research elements may suffer from a lack of close monitoring. The long term gain of institutionalizing PRINAPS as a part of the current system may offset this problem.

Promoters are assigned to communities of about 50 households, although they cover fewer households in areas with dispersed populations in order to lessen travel loads. There is, however, some ambiguity about the project's orientation towards outreach. The MDH seems to perceive promoters as facility-based workers, while USAID

evaluators continue to hope for community outreach. This problem parallels the old struggle of curative and preventive orientations.

PRINAPS is confronting many other community health worker issues that plague primary health care. Establishing priorities for promoters has been a long process of curriculum development, modifications for simplification, training, evaluation of what is retained and then further modification to identify not only the most useful skills but also the ones most likely to be retained and maintained. Supervision is also receiving serious attention, and PRINAPS may produce worthwhile information about the kind of supervisory input most likely to lead to good health services. Recruitment of the promoters will also be studied for correlation with performance.

If the project is successful, AID will consider providing further funds for training promoters, using the model developed in PRINAPS. Although not directly linked with the Community-Based Health and Nutrition System Project, PRINAPS should provide valuable inputs for the design of that project. It has particular relevance, as both projects will be developed in an area populated by Indians. Furthermore, research projects like this should increase the scientific foundation for more effective primary health care programs.

#### REFERENCES

See first Guatemala project summary.

GUATEMALA

IDENTIFICATION

Project Name and Number: Integrated System of Nutrition and Primary Health Care (SINAPS), Number 932-0631.

Location: Phase I - 3 districts in western Guatemala (70,000 people)  
 Phase II - 3 departments (250,000 people)  
 Phase III - nationwide

Project Dates: Phase I - January 1979-May 1981 (to be extended to Jan. 1982)

Funding Level and Sources: \$1.1 million (grant)

Responsible Offices: USAID/Office of Population

Implementing Agency: INCAP and the Ministry of Health

COUNTRY STATISTICS

Total Population: 7.0 million

Rural Population: <u>61 %</u>	Infant Mortality Rate: <u>76</u>
Population Growth Rate: <u>3.1%</u>	Life Expectancy at Birth: <u>57</u>
GNP Per Capita: <u>\$910</u>	Adult Literacy Rate: <u>47%</u> (40-rural; 82-urban)

## SYNOPSIS

This Office of Population grant supports a primary health care research and service delivery pilot project in three districts of western Guatemala. Emphasis is on outreach (home visiting). The findings of SINAPS should add to the information on which the GOG will base the final configuration of its national PHC system.

## PROJECT DESCRIPTION

In 1979, AID's Office of Population agreed to provide a \$1.1 million grant to INCAP/PABD for a 16 month long primary health care research and service delivery pilot project in three districts of western Guatemala. In this program, maternal - child health and nutrition services, medical care, environmental sanitation assistance, family planning education and contraceptives are provided by promoters, trained traditional birth attendants (TBAs), TSRs and auxiliary nurses. Community involvement through extensive home visiting and other community health activities is emphasized. The project staff is conducting training and research, as well as providing some food, medicine, and contraceptive supplements, while the MOH is contributing personnel, facilities and supplies.

The project is planned in three phases:

- I. to reach a target population of 70,000 people in the western part of Guatemala, populated by ladinos (people of mixed Spanish/Indian culture).
- II. to reach a target population of 250,000 people in three departments of Guatemala, including the control villages used during Phase I.
- III. to implement the programs nationwide.

An AID grant of \$1.1 million provides funds for Phase I of the project, which was planned from January 1979 to May 1981, but has been extended eight months. Meanwhile, operational studies are being undertaken. A control population has been set aside and will receive the regular MOH services. Infant mortality rates, contraceptive utilization, malnutrition prevalence, and childhood morbidity will be compared with those areas receiving the community outreach services of SINAPS.

These services are provided by promoters selected by community health committees, with varying amounts of consultation with the local TSR, who also trains and supervises the promoters. Making regular home visits to 30-50 families is the promoters' primary activity during which he or she (usually she) collects census

data, offers contraceptives, teaches oral rehydration techniques, inquires about health problems and treats what she is able with Oralyte, piperazine, expectorant, antiseptics, and first aid supplies. Promoters earn a small commission by charging for drugs at levels set by the health committee. They also work with the local TBAs to identify high risk pregnancies, and they assist the TSRs with growth monitoring and vaccination campaigns. Interesting and unusually generous incentives are planned for the promoters: diplomas, exoneration from military service, food supplements and free health care, and a possible income from injections.

The TSR takes on a well defined outreach-based role in this project - he (usually) is responsible for conducting an area needs "diagnosis" for about 5,000 people, organizing health committees and special health campaigns, as well as teaching and supervising about 20 promoters. He is salaried and supplied with a motorcycle and a simple medical kit.

Auxiliary nurses will train "comadronas" or TBAs in hygienic deliveries and in identifying low birth weight infants. These nurses work primarily in the clinics and receive referrals from the promoters.

Other important elements of the project include the development of a promoter-based information system using simple forms and longitudinal family records, and a new system of supervision involving special training for TSRs and the district physicians and central TSRs who supervise the TSRs.

#### IMPLEMENTATION EXPERIENCE

Major project activities to date have been:

- conducting a baseline household survey;
- developing a promoter training curriculum;
- training and deploying 385 promoters;
- giving supervisory training for TSRs, nurses, and district physicians;
- providing additional training to upgrade the health center based auxiliary nurse;
- training TBAs in improved obstetrical care;
- establishing community health committee; and
- developing information system forms.

By May 1980, the first mass campaigns of vaccination and detection of malnourished persons were conducted. These resulted in a vaccination coverage of 78.7%. The household distribution of contraceptives has resulted in a 77% acceptance rate in a pilot area. Attendance at weekly training sessions is high—about 92%.

Because this project is planned primarily for operational research purposes, the project plan allows for creativity and flexibility. It is one of a number of rural health models from which the GOG will be able to choose as it extends its health services. (PRINAPS, also centrally-funded, provides other options.)

Although a major effort has been made to keep the research aspects of the SINAPS separate from service delivery, complications abound. Promoters and TSRs, for instance, are expected to do far more data collection than usual or useful to their own work. Evaluators have voiced concerns that service delivery ability not take a back seat to research. Nevertheless, the research findings may be valuable for improving this and other MOH primary health care programs.

Activities currently underway in the second year of the project include: further training of promoters and administrators; distribution of field guides; improvement of information system in support of supervision and further evaluation of ongoing data collection. Phase II of the project (an expansion to 3 departments) has been postponed until at least mid-1982.

#### REFERENCES

See first Guatemala project summary.



## GUYANA

IDENTIFICATION

Project Name and Number: Rural Health Systems, Number 504-0066

Location: Nationwide

Project Dates: FY 1979 - FY 1981

Funding Level and Sources:

AID:	\$1.8 million (grant)
	2.9 million (loan)
Government of Guyana (GOG):	2.5 million
Villages:	.5 million

Responsible Offices: Health Officer, USAID/Guyana

Bureau for Latin America and the Caribbean, Office of Development Resources, Health and Nutrition Division, AID/Washington

Principal Contractor: University of Hawaii/Manoa

Implementing Agency: Ministry of Health (MOH)

COUNTRY STATISTICS

Total Population: 0.9 million

Rural Population: <u>60%</u>	Infant Mortality Rate: <u>50</u>
Population Growth Rate: <u>2.1%</u>	Life Expectancy at Birth: <u>69</u>
GNP Per Capita: <u>\$560</u> (10/80 cable)	Adult Literacy Rate: <u>87%</u> (PP)

SYNOPSIS

The Rural Health Services project is designed to improve and expand primary health care services throughout Guyana. A specific goal is that 80% of the rural population will receive health care coverage through the training and deployment of Medex, mid-level health workers. Although the project plans also include the training and deployment of community health workers, it appears that these plans may not be achieved under this particular loan/grant.

## BACKGROUND

In Guyana, the need for expanded basic health care service is evident. Approximately 20% of the total deaths are due to communicable diseases. There is a significant resurgence of reported cases of malaria in the hinterlands, where health services are minimal and erratic. Over 40% of Guyanese children under age 5 suffer from some degree of malnutrition. Nutritional deficiencies are most severe, though, in the rural areas where contaminated water supplies are a common and significant problem. As in most LDCs, however, a shortage of health services personnel, a lack of equipment, and an inadequate number of health facilities make improving coverage a difficult task.

In 1975 the Ministry of Health began an organized effort to resolve Guyana's health problems. A task force was established to design a strategy for delivering improved and expanded health services to needy areas of the country. Upon determining that the use of medical auxiliaries was necessary if there was going to be any hope of achieving the desired health care coverage, the government decided to train mid-level health workers using the MEDEX approach.

In 1976, the MOH initiated a nationwide primary health care system based on the MEDEX approach. The program had support from the International Development Research Center (IDRC) and the Health Manpower Development staff at the University of Hawaii. Training of MEDEX began in 1977 and continued until the end of 1979.

Assisted by the Netherlands government, the MOH began another project in 1979. The goal of this small pilot project is the training and deployment of 30 community health workers over a two year period. Part of Guyana's long-range strategy is the delivery of primary health care at the periphery by CHWs.

A third project developed in 1978 with the Inter-American Development Bank complements the MEDEX and CHW programs. The IDB program focuses on the expansion and improvement of health care coverage through the construction and upgrading of health facilities and through better utilization of the existing health management infrastructure.

## PROJECT DESCRIPTION

The Rural Health System (RES) project was designed to support the GOG's commitment to extending PEC services through the use of paramedics. Strengthening, expanding, and institutionalizing the Guyana MEDEX program are the major objectives of the RES project. In addition, it is anticipated that the experience gained from the Netherlands CHW project will provide the groundwork for a larger

CHW training program.

MEDEX trainees are recruited from a pool of nurses and other qualified categories of health personnel. Since they already hold full-time government positions, problems generally do not arise over funding for salaries.

In addition to having the requisite background, MEDEX students must show a willingness and commitment to be posted after graduation to predominantly isolated, rural settings.

After being selected, the MEDEX trainees attend a fifteen month training program to provide them with the experience necessary to perform their jobs. Modular training phases of six to seven months each prepare MEDEX to do promotive, preventive, and curative care to the extent that they are able to handle 80% of the common conditions seen by primary care physicians.

In order to expose students to every kind of case they are likely to encounter in the field, the training program includes clinical practice in a hospital. Laboratory training and community health training are incorporated into other modules.

MEDEX are also being trained in mid-level leadership and management skills. Under this AID program, which is an expanded version of the IDRC project, MEDEX will be assigned additional health station management responsibilities. In addition, they will eventually become trainers and supervisors of CHWs located in villages. Ultimately it is estimated that a deployed MEDEX at his/her rural site will be responsible for four villages with functioning CHWs.

Once the MEDEX are in the field, it is anticipated that the time commitments to their responsibilities will break down as follows: 50% clinical primary care, including promotive and preventive work; 10% management; 40% community health services, including supervising CHWs.

When the IDRC MEDEX program got underway in 1977, a special MEDEX training unit was created by the MOH. This same unit is continuing the training program under the RHS project. Plans are being made, however, to institutionalize all health staff training currently done by the MOH, at the University of Guyana. Once the Department of Health Science is upgraded into a full faculty, the MEDEX training unit will be transferred to it.

The RHS project calls for training 24 MEDEX per year for the three years of the project. Including the MEDEX trained under the IDRC project, approximately 130-140 MEDEX (less those who drop out) will be in Guyana by completion of the project. Three will serve as tutors of the MEDEX Training Unit; ten will be trained and deployed as Senior MEDEX to provide supervision and continuing education at the district level; seven will be trained and

Deployed at the regional level for administration/management and supervision; two will be trained and deployed at the central MOH level for administration management and supervision. Thus 100-110 MEDEX will be left for normal assignment.

While the RHS project's major focus is on basic training and continuing education of MEDEX and, eventually CHWs, the development of a permanent, institutionalized management support infrastructure is essential to their effective utilization.

Ultimately, MEDEX will be assigned to 100 different locations throughout Guyana. Based on this site distribution, 41 houses, 50 water supplies, and 50 latrines need to be built before the MEDEX are deployed. A significant proportion of the project funds are allocated specifically for this construction.

### IMPLEMENTATION EXPERIENCE

Four classes of MEDEX have completed their training since the program began. The fourth class, consisting of 17 people, completed its work only in July 1981 but of the 60 MEDEX from the other three groups, 26% are deployed in the hinterlands; 40% in the rural coastal areas; 7% in the inland river area, and 26% are in urban sites. Among the graduates, five at headquarters are becoming tutors who help train MEDEX and who supervise each MEDEX site at least two times a year. Two additional classes of 20-25 students each will be trained during the last two years of the project.

Deployment of the MEDEX has been less rapid than was originally hoped. Facilities, including housing, still need to be constructed before all the field staff can be placed.

An effective two-way radio communication system links the MEDEX who are stationed in the field with their supervisors in Georgetown. Continuing education, referrals, difficult diagnoses and administrative concerns are all dealt with via radio. Also, every Saturday morning there is a conference on a medical case which is discussed at length.

Funded through the RHS project as a feasibility study, the radio communications system has been evaluated and recommended for expansion. Nine MEDEX stations are now linked with the headquarters in Georgetown and by the end of the project up to 40 radios will be operating.

MEDEX training generally has followed the original plan, although a few changes have occurred. The modular schedule for the fourth class of MEDEX was revised to include a five-week block of activities devoted to developing MEDEX skills in both community health assessment and the identification of community health strategies. This training component seems to be a wise addition to

the program as project evaluators determined that MEDEX training needs to include more site visits to encourage MEDEX not to be too clinically oriented. More intersectoral cooperation and teamwork should be required, too, according to an evaluation of the program made in January 1981.

MEDEX trained to date have not been taught to train CHWs, although the project paper described this activity. So far, the only CHWs are the 26 who were trained under the Dutch program. A partial evaluation of that project based on interviews with half of the CHWs was made in June 1981 but yielded few firm conclusions or recommendations. Since the Netherlands program was to serve as a pilot project for the CHW component of the RHS project, that aspect of the project is not yet proceeding. There is not enough information upon which to make training and supervisory decisions about CHWs on a much larger scale. The January 1981 evaluation states that MEDEX from class four were to be prepared for their role as CHW trainers and supervisors (and that MEDEX trained earlier will receive a special course). However, later reports indicate that it is possible that the MEDEX will not play that role. Among the reasons for this change is the fact that MEDEX do not have the time in their work day to fulfill CHW-related functions.

At the time of this writing there is no information available on the performance and effectiveness of the MEDEX either in the field or in positions within the health management infrastructure. Before the end of the RHS project, however, two more evaluations are planned.

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Interview:

Linda Lion, Health Officer, USAID/Guyana, 8/4/81.

HAITI

IDENTIFICATION

Project Name and Number: Strengthening Health Services II,  
Number 521-0086

Location: No specific location

Project Dates: FY 1977 - FY 1982

Funding Level and Sources: USAID: \$7.5 million  
Republic of Haiti: \$5.6 million

Responsible Offices: Health Officer, USAID/Haiti  
Bureau for Latin America and the  
Caribbean, Office of Development  
Resources, Health and Nutrition  
Division, AID/Washington

Principal Contractor: Westinghouse Health Systems

Implementing Agencies: Department of Public Health and  
Population (DSPP), of the Republic  
of Haiti, and the National Service  
for Endemic Diseases

## COUNTRY STATISTICS

Total Population: 5.8 million

Rural Population: 65%

Infant Mortality Rate: 130

Population Growth Rate: 2.6%

Life Expectancy at Birth: 51

GNP Per Capita: \$260

Adult Literacy Rate: 23%

### SYNOPSIS

Strengthening Health Services II continues support for anti-malaria activities and technical assistance in health planning for the Haitian Department of Public Health and Population. The purpose of technical assistance provided in this project is to prepare for a large Rural Health Delivery System project slated to begin in 1980. A 1979 evaluation of the Health Services II project, however, concludes that the Department of Public Health and Population is insufficiently prepared for the new large project.

### BACKGROUND

The poorest health indicators of any nation in the Western Hemisphere can be found in Haiti. Since the mid-1970's USAID has assisted the Department of Public Health and Population (DSPP) of the Republic of Haiti with several projects to assist in the development of an integrated rural health service that uses a mix of health professionals and paraprofessionals and that is supported by an improved supply, supervision, and referral infrastructure. These projects include Maternal and Child Health/Family Planning Projects 0071 and 0087, Nutrition Improvement Project 0075, Phase I Strengthening Health Service Project 0070, and Phase II Project 0086. The last in the preceding list of projects is the subject of this summary and progress report.

### PROJECT DESCRIPTION

Strengthening Health Services Phase II (0086) has two distinct parts: (I) providing support for the anti-malaria program of the National Service for Endemic Diseases (about \$5 million over a 5 year period) and (II) assistance at the headquarters level of DSPP to improve administrative and planning capability for a future nationwide rural health service (approximately \$1.5 million). Because malaria control is beyond the scope of this paper, only part II of the project will be addressed in this summary.



Activities planned include field training for students in the medical school's new Department of Community Medicine; an exchange program between the new department and the Harvard School of Public Health; partial funding of the Petit-Goave Health Demonstration Project; budget support for personnel and some operation expenses of the DSPP's Bureau of Planning, Bureau of Administration, and Statistical Service; and technical assistance to upgrade the administrative and planning capability of DSPP, including assistance in implementing necessary organizational and management reforms.

### IMPLEMENTATION EXPERIENCE

The Strengthening of Health Services II (not including the malaria control segment) was evaluated by a Pacific Consultants team in April 1979, headed by J.S. Prince. Prince et al. found that the institution-strengthening goals of the project had only partially been met and expressed reservations about whether the larger follow-on Rural Health Delivery System Project (0091) could be implemented successfully.

#### Administrative Issues

One of the long term goals of the rural health delivery system in Haiti is the expansion and integration of services now provided under categorical or single purpose programs. According to Prince et al., donors, in their effort to assist with integration are confronting the consequences of their past assistance to Haiti. They note that (p.16):

...the Department of Public Health and Population (DSPP) developed organizationally in too great a degree as a response to donor interests. The Divisions of Family Hygiene (DFH) and Nutrition (BCN), and the Malaria Eradication effort (SNEEM), have been funded directly by population, nutrition, and endemic disease control monies and are relatively strong, essentially vertical programs. Thus the donors have encouraged a multipartite system that creates a difficult problem for the DSPP planners trying to rationalize a unified health delivery system....Moreover, moving from categorical programs to an integrated system will create enormous problems—possibly leading to a reduction in the efforts of the individual programs....

#### Technical Assistance

Prince et al.'s most critical observations were reserved for the technical assistance provided to DSPP by Westinghouse Health Systems. While Prince et al. fail to mention that Westinghouse was the technical assistance contractor for Phase I of the project (Project 0070), rather than the Phase II (0086) being evaluated, their comments are still relevant. The confusion on the part of Prince et al. illustrates the type of financial, administrative and authority problems that arise when different segments, of

essentially one project, overlap due to delays.

Regarding technical assistance provided by Westinghouse, Prince et al. (p. 25) note:

Although the project was intended as an institution building effort,...the pressures to complete the "deliverables" (some 17 reports) diverted attention from the longer term process of providing real technical education and assistance. The reports seem to have been end products in themselves and because of tight contractual schedule, did not all coincide with the immediate planning and administrative needs of the DSPP.

Some of these Westinghouse reports were technical manuals. Prince et al. (p. 26) comment:

The development of...manuals should have been an educational process for the DSPP. But, because the project was timed to meet a tight schedule, and because of the paucity of 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. A manual is not likely to be well used unless the users participate most actively in its development.

The tendency for products such as reports or manuals to become ends in themselves rather than means to ends is called goal displacement. It commonly occurs in projects where there is pressure to measure the achievement of ends or goals yet where these goals (such as "development") are difficult to quantify or measure.

### Language

A common problem in U.S. technical assistance is lack of sufficient knowledge of the language of the host country—in the case of Haitian health professionals—French. Prince et al. (p. 25) note that:

...several of the short term consultants, though well qualified in their areas of expertise, were not able to speak French. The long term consultant['s]...French was not adequate to enable him to communicate freely with his Haitian colleagues, and to provide the necessary advice to them on the implementation of the concepts recommended by the specialized advisors.

Though nominally a 5 year project (1977-1982), many of the technical assistance components of the project are repeated in the larger Rural Health Delivery System Project (0091). Management Sciences for Health was chosen in June 1980 to provide technical assistance for this phase of the project. There was a gap in

technical assistance to DSPP from December 1978 when Westinghouse left until June 1980 when the new contractor was assigned to the project.

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Strengthening Health Services II, a Project Evaluation Summary, Part 1. USAID Document, April 1979.

Comments on first draft by USAID/Haiti.

### Interviews:

Mark Laskin, Project Manager and Technical Advisor, Latin American Bureau, AID/Washington, July 15, 1980.

Nick Fusco, formerly Project Manager, Westinghouse Health Systems Team in Haiti, now in New York, July 15, 1980.

HAITI

IDENTIFICATION

Project Name and Number: Maternal Child Health/Family Planning II, Number 521-0087

Location: Nationwide

Project Dates: FY 1978 - FY 1981

Funding Level and Sources: AID bilateral grant: \$1.8 million  
AID Title X commodities: \$2.1 million  
Republic of Haiti: \$3.6 million

Responsible Offices: Health Officer, USAID/Haiti  
Bureau for Latin America and the Caribbean, Office of Development Resources, Health and Nutrition Division, AID/Washington

Contractor: No major contractor for the bilateral portion of the grant

Implementing Agencies: Department of Public Health and Population, Division of Family Hygiene, Republic of Haiti

## COUNTRY STATISTICS

Total Population: 5.8 million

Rural Population: 65%

Infant Mortality Rate: 130

Population Growth Rate: 2.6%

Life Expectancy at Birth: 51

GNP Per Capita: \$260

Adult Literacy Rate: 23%

## SYNOPSIS

The Maternal Child Health/Family Planning II project trains and deploys health workers, renovates dispensaries, supports surgical family planning teams as well as family planning and health education activities. This is accomplished through support of the MCH and Family Planning Program of the Division of Family Hygiene. Due in part to past AID support, the Division of Family Hygiene has accumulated invaluable experience in the delivery of health services to the poor. The new Rural Health Delivery System Project can draw on this experience.

## BACKGROUND

Health status indicators for Haiti's rural population are among the lowest for any population in the Western Hemisphere. While medical and nursing schools in Haiti produce close to adequate numbers of physicians and professional nurses, these personnel have little inducement to serve in rural areas.

Institution building has been a chief goal of past and present health projects in Haiti. The best example of successful institutional support is the Division of Family Hygiene (DFH) which is actively supported by AID as well as other international donors. According to the AID project paper (p. 29), the DFH has:

...demonstrated a better technical and managerial capability than any other DSPP entity. It uses salary bonuses to attract qualified people and to provide effective service. It is a well organized institution with good leadership and a dedicated staff who aggressively pursue its goals in a coordinated manner.

The importance of DFH lies in the rich experience accumulated during the last several years of providing maternal child health

and family planning services through a network of clinics, satellite units and dispensaries.

#### PROJECT DESCRIPTION

The project summarized here is a follow-on project to Maternal/Child Health/Family Planning I (number 0071). The present project continues support for selected DFH activities begun under the earlier 0071. The goal of this project, besides supporting MCH health activities, is to increase the number of family planning acceptors and make more freely available the contraceptives provided through AID/Washington's Office of Population (Title X).

Planned project activities include:

- Training and retraining of up to 540 health agents; including training of trainers together with expenses and transportation for trainees and trainers;
- Training courses and supplemental salaries for 170 auxiliary nurses;
- Renovation, supply and/or maintenance for up to 170 dispensaries;
- Training courses, transportation and expenses for district and higher level supervisors;
- Surgical contraception team salary supplements, expenses and clinic support;
- Equipment, maintenance and provision of expenses for four mobile units and their personnel; and
- Public education and communication activities including 7 radio programs, movie projectors and projectionists, and 1 outreach workers to work with community organizations.

U.S. assistance with the above listed activities will total an estimated \$1.77 million over a three year period.

#### IMPLEMENTATION EXPERIENCE

Despite the fact that the project was evaluated in October 1979 (by John Kennedy, M.D. et al.) and its predecessor project 0071 was evaluated (by Sam Wishik and Norine Jewell) in January, 1979, it is difficult to judge how many of the planned activities were carried out and what impact the project has had. This may be due to the fact that evaluators were given a dual task—to assess the project's progress and to make recommendations regarding the feasibility of a large follow-on Rural Health Delivery Project. To do this the evaluation team (Kennedy et al.) focused on the entire DFH MCH/family planning program rather than AID's particular

contribution to it in this project and its predecessor. In fact, the evaluation team probably underestimated the contribution of AID to the MCH/family planning program of Haiti as shown by the following quote (p.25):

During the last five years, total foreign assistance to MCH/FP has been about \$6.5 million, with the bulk (about \$5 million) provided by UNFPA and other United Nations agencies. AID's contribution has been relatively small, averaging about \$250,000 per year for a total of about \$1 million.

Although neither evaluation permits us to track specific project outputs for the two projects, their more general focus is valuable because each evaluation contains considerable information on the type of experience DFH gained in delivering basic health and family planning services to the poor. These areas of new experience are discussed below.

#### Public Education

Although Wishik and Jewell (pp.14-17) focus on the problems of the Health Education Section of DFH, it is generally agreed that Haiti has an active health education unit that has an impressive list of accomplishments. For example, the unit has produced four films on maternal/child health and family planning and numerous articles on health topics for the local press. Twenty basic health and family planning messages were produced on cassette tapes for use in clinic waiting rooms.

The Health Education Section also produces Radio Docteur, a 10 minute radio program broadcast twice a day six days a week. The program features dialog in Creole between two actors who assume the role of husband and wife, patient and doctor, or patient and nurse. Response to the program is enthusiastic. A survey in one village, where the program had been heard for several years, showed a clear improvement in the level of health knowledge concerning subjects covered in the radio series.

#### Training of Traditional Midwives

According to the project paper, the Pathfinder Fund was to provide \$174,000 to continue the training and supervision of traditional midwives (matrones) in family planning and mother/child health. This did not occur because, according to a Pathfinder Fund representative, family planning was not given a high enough priority in the matrone training curriculum. Wishik and Jewell (p. 13) believe that the withdrawal of support is unfortunate as the "national midwife training program is highly innovative, has contributed greatly to a public support base by bringing traditional personnel into the MCH/FP system...." Matrone training is not emphasized in the project paper for the new Rural Health Delivery System project (0091) scheduled to begin in 1980. Nevertheless,



the Haitian experience in the training of traditional midwives and the results of that training are valuable and worth examination. Hopefully, the absence of matrone training in the new health project does not mean that this experience will be lost outside Haiti.

### Unrealistic Goals

One of the project goals was to help increase the number of family planning acceptors to 20% of women in the fertile age groups (about 235,000 women) by 1980, compared to an estimated 15% of the women (about 143,000) in 1978. This target appears impossible to reach as more recent DFH figures cited by the evaluation team show only 46,000 females as active family planning acceptors in 1978 (less than 5% of the women in the fertile age groups). One reason for the uneven success of DFH in attracting new family planning acceptors, according to Kennedy et al. (p. 89-90), is a relative lack of effective family health care services in clinics.

Family planning commodities are more than adequate. In fact, consultants visiting Haiti in the last two years report an overabundance of condoms, cases of which take up needed space in warehouses and health centers. A PAHO consultant who visited Haiti in 6 February 1979, reported: "there is or will shortly be at least a 1 year supply of condoms in Haiti by the end of 1979."

### Oral Rehydration

Over the long term, there is no substitute for clean water, better sanitation/hygiene and improved nutrition for reducing mortality of infants and young children due to diarrhea. In the short term, however, the oral rehydration of children suffering from diarrhea may save lives.

The Kennedy et al. evaluation team found that DFH staff are familiar with the proper preparation and use of Oralyte, an oral rehydration mixture. However, the consultants note that in most areas Oralyte packets are only available in small quantities and are usually reserved for the most severe cases. This defeats the purpose of the program. The evaluation team recommended that health staff use Oralyte in the early stages of diarrhea to prevent its progression to severe dehydration, which is often fatal when associated with malnutrition.

Encouraging the early use of oral rehydration mixtures requires that relatively large amounts be available in the home, or at least in the community. In some parts of Haiti, the fees charged for Oralyte preclude widespread use of the product. Oralyte or a similar mixture must be provided free in a poor society such as rural Haiti, if it is to be effectively promoted.

While project evaluators found many problems in attempting to provide low cost health services to the rural poor in Haiti, there are successful aspects of the programs which can serve as models for expansion of the rural health care system. Kennedy et al. noted that DFH has a well defined supervisory system for clinics in the southern region which could serve as a model for other regions. In some regions, especially where UNICEF has been supplying medicines, the DFH logistics and supply system is working well (p. 69, Kennedy et al.).

In the area of health education, training of nurse auxiliaries and deployment of community health workers, there is much to be learned from the Haitian experience. Hopefully, the full range of this experience will be used in the implementation of the new large Rural Health Delivery System Project (0091) beginning in 1980.

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- Comments on first draft by USAID Haiti.

### Interviews:

- John Kennedy, M.D., M.P.H., July 9, 1980.
- Susan Klein, M.P.H. (by phone), June 20, 1980.
- Jacqueline Smucker, MS.S.A. (by phone), July 8, 1980.

## HAITI

IDENTIFICATION

Project Name and Number: Rural Health Delivery System,  
Number 521-0091

Location: Nationwide in stages beginning with  
the northern region

Project Dates: FY 1979 - FY 1983

Funding Level and Sources: USAID Grant: \$16 million  
Government of Haiti: \$17 million\*

Responsible Offices: Health Officer, USAID/Haiti  
  
Bureau for Latin America and the  
Caribbean, Office of Development  
Resources, Health and Nutrition  
Division, AID Washington

Principal Contractor: Management Sciences for Health

Implementing Agencies: Department of Public Health and  
Population, Republic of Haiti

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\*A major proportion will be generated by P.L. 480 Title I  
commodity sales.

## COUNTRY STATISTICS

Total Population: 5.8 million

Rural Population: <u>65%</u>	Infant Mortality Rate: <u>130</u>
Population Growth Rate: <u>2.6%</u>	Life Expectancy at Birth: <u>51</u>
GNP Per Capita: <u>\$260</u>	Adult Literacy Rate: <u>23%</u>

## SYNOPSIS

The Rural Health Delivery System project will train and deploy health workers, build and renovate health centers, purchase drugs, equipment and vehicles and continue technical assistance to the Haitian Department of Public Health and Population. Although implementation of this large scale project only began in the summer of 1980, previous projects with similar goals suggest the type of problems that the new project will encounter.

## BACKGROUND

Haiti suffers from the shortest life expectancy, highest infant mortality and greatest morbidity from contagious diseases of any country in the Western Hemisphere. This is especially true of the rural poor who have little access to modern medical care. In addition the rural poor lack potable water, adequate sanitation and adequate nutrition. Poor nutrition is especially common among young children.

Since the mid-1970's USAID has helped the Government of Haiti to extend health services to underserved rural areas. Summaries of the Maternal Child Health/Family Planning and the Strengthening Health Services II Projects in this volume outline the important antecedents for the present large scale Rural Health Delivery System (RHDS) project.

## PROJECT DESCRIPTION

The goal of the RHDS project is to build a low cost nationwide health system by 1985 to provide basic preventive and curative medical services for up to 70% of the rural population. Paramedical personnel (550 auxiliary nurses and 1,500 health agents) will be trained to provide services in family planning, nutrition, and prenatal care, as well as oral rehydration of children, treatment of respiratory diseases, and immunizations. Paramedics will be trained to collect basic demographic and health status information on a regular basis.

Besides training and paying the salaries of paramedical personnel, project funds will be used to build and renovate health centers; purchase drugs, equipment and vehicles; and provide technical assistance to the Ministry of Health in health planning and the management and supervision of the expanded health system.

The following table shows the projected budget for the 5 year project period by activity.

<u>Activity</u>	<u>USAID Contribution (in U.S. \$ millions)</u>	<u>Republic of Haiti Contribution (in U.S. \$ millions)</u>
Construction and renovation	5.2	
Drugs and Vac- cines	1.0	2.2
Equipment and Supplies	1.4	.3
Vehicles	1.2	1.5
Personnel	1.6	11.5
Training	1.8	1.3
Technical Assis- tance	2.4	
Evaluation	.1	

The table shows that almost one third of the budget will be used for construction, equipment, vehicles and supplies. The Government of Haiti will be primarily responsible for personnel costs, normally the largest expense in a primary health care system. Less than 3/10ths of one percent of the budget is earmarked for evaluation.

#### IMPLEMENTATION EXPERIENCE

An important goal of the RHDS project is promote the integration of services of the semiautonomous units within the Ministry of Health which now function as categorical or vertical health service programs. For example, the Bureau of Nutrition manages nutrition programs, the Division of Family Hygiene manages MCH and family planning programs, and the National Service for Endemic Diseases manages anti-malaria programs—each program with its own cadre of paramedical field personnel. Integration of these semiautonomous units, whose autonomy derives from the fact that they receive funds directly from a number of international

donors, will not be easy. Because so many tasks of a primary health care worker involve mother and child health, it is the Division of Family Hygiene (DFH) responsible for mother/child health and family planning in the Department of Public Health and Hygiene which may possess the most experience relevant to a larger, integrated nationwide primary health care system. In fact, the DFH has built up a fund of experience in the training of auxiliary nurses, health agents and traditional midwives and in the fielding and supervising these personnel. Because the larger Rural Health Delivery System Project (0091) has only just begun implementation, an examination of the experience of DFH in providing mother/child health services may anticipate or reflect problem areas which the new larger project may encounter. The remainder of this summary reviews those problem areas.

### Possible Problem Areas

In their October 1979 evaluation of the mother/child health and family planning of DFH, project consultants Kennedy et al. found the training of auxiliary nurses—personnel to be used in large numbers in the new project—deficient in skills needed in a clinic or field setting. The 9 month curriculum, according to the evaluation team, allocates many hours to theory and practice of tasks performed in a hospital setting with insufficient time remaining for learning tasks essential to a primary care setting.

### Training Health Agents

The evaluation team observed health agents working in villages. In some cases, the agents appeared to lack a sense of what they were supposed to do and failed to establish rapport with the villagers they visited. In a number of cases the agents provided no opportunity for questions or for a discussion of health problems — possibly due to insecurity about their level of knowledge of the subject. Some villagers questioned the value of the agent's work because the agent's knowledge of sickness and health seemed only slightly better than their own.

The evaluation team recommended that the training of health agents be upgraded to emphasize specific practical tasks to be performed and not general principles or theory. An effective, task-oriented training program would need to rely on models, teaching aids, the use of realistic settings likely to be encountered by the health agents.

### Health Education

The MCH/Family Planning evaluation team observed a widespread indifference on the part of more highly trained health professionals to the use of health education to promote good health and prevent disease. Many of the health professionals employed in the MCH/Family Planning program see their role as

clinicians who are needed to treat more severe and complicated cases which auxiliaries are not qualified to handle. For example, many of the younger physicians, according to the evaluation team, regard only severe malnutrition as a disease worthy of their professional attention. They do not perceive the more important role of recognizing and correcting malnutrition in its earlier stages. They also fail to recognize the need to instruct mothers in such preventive practices as proper child feeding using locally grown products.

According to the evaluation team, other health personnel also fail to perceive childhood malnutrition except in its most severe form. For example, staff in several facilities reported only an occasional case of malnutrition despite the fact that a cursory examination of children in the area revealed that approximately half the toddlers had some degree of protein-energy malnutrition. Parents became angry, according to staff, when they were told about proper feeding of young children using milk, cheese, eggs, meat and fish as protein sources—foods beyond the reach of most of the rural poor. Health facility staff have apparently not been informed of the protein value of locally produced foods such as peas and beans.



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Rural Health Delivery Systems Project Paper. August, 1979.

Comments on first draft by USAID/Haiti.

### Interview:

Mark Laskin, RHDS Project Officer, Latin American Bureau, USAID, July 14, 1980.

HONDURAS

IDENTIFICATION

Project Name  
and Number: Integrated Rural Health Services,  
Number 522-0130

Location: Nationwide

Project Dates: FY 1976 - FY 1981

Funding Level  
and Source: AID grant: \$1,296,000  
Government of  
Honduras (GOH): \$ 857,000

Responsible Offices: Health Officer, USAID/Honduras  
  
Bureau for Latin America and the  
Caribbean, Office of Development  
Resources, Health and Nutrition  
Division, AID/Washington

Long-term Consultants: In the areas of monitoring and  
evaluation

Implementing Agencies: Ministry of Health, Division of  
Maternal and Child Health

## COUNTRY STATISTICS

Total Population: 3.8 million

Rural Population: <u>64%</u>	Infant Mortality Rate: <u>103</u>
Population Growth Rate: <u>3.5%</u>	Life Expectancy at Birth: <u>57</u>
GNP Per Capita: <u>\$480</u>	Adult Literacy Rate: <u>57%</u>

## SYNOPSIS

Honduras' rural health outreach system has undergone a steady evolution since its beginning in 1974. According to a 1980 health sector assessment, GOH commitment and support are strong, and serious efforts are being made to shift from a vertical, hospital orientation to one emphasizing integrated basic health care. MOH statistics clearly indicate that coverage has increased and the number of consultations given at rural health facilities has grown since the project began. This project has made an important contribution by supporting the crucial first steps in establishing a system for training the paramedical personnel who form the foundation of the primary health care system.

## BACKGROUND

The rural poor of Honduras (an estimated 2 million people - 54% of Honduras' population) suffer from many health conditions common in the developing world. An annual per capita rural income of \$65, derived almost entirely from agriculture, does not begin to cover basic food, shelter and clothing needs. A complicating factor is one of the highest population growth rates in Latin America. Lack of health-related information, limited access to health care, an unfavorable home environment, and lack of education and money all restrict health improvements.

GOH policy reflects an awareness of these problems and a serious attempt to deal with them. As part of a broad rural development effort, the 1974-78 and 1979-83 National Health Plans have emphasized low cost, comprehensive health coverage for the rural poor, with special emphasis on maternal-child health (MCH), disease prevention, health education, water and sanitation and vector control.

In 1974 the MOH began its Rural Penetration Program to bring a basic community health care delivery system to rural areas. The program is designed to increase rural health coverage using a pyramidal system with volunteer community health workers at the base, with care advancing in complexity through levels of health posts with auxiliary nurses (CESARs), health centers with physicians (CESAMOs), emergency hospital centers (CHEs), regional hospitals

and national hospitals.\*

This project is part of a larger effort comprising several projects or components funded by AID and other donors as well as the GOB.

Related AID projects are assisting health planning/management, health education, nutrition, rural water and sanitation, and supplementary feeding programs using PL-480 Title II foodstuffs. A \$16 million health sector loan/grant is now under consideration to assist Honduras' health care system through support for health technologies, logistics and maintenance, planning and management, and human resources development and supervision.

Other major donors include the Inter-American Development Bank (IDB), which has provided loans for construction and improvement of health care facilities (\$14 million for 10 new hospitals and 235 rural health posts, 1976-81). Through studies and training, the Pan American Health Organization (PAHO) is providing short-term technical assistance on specific problems. The United Nations Development Program and the United Nations Fund for Population Activities are supporting the Ministry's MCH services. Water and sanitation projects are being supported by several organizations, including the European Economic Community (EEC), UNICEF, the Swiss government, Foster Parents Plan and CARE.

#### PROJECT DESCRIPTION

The current project supports the MOH's Rural Penetration Program by developing the Ministry's capability for training paramedical workers. AID funding covers construction and equipping of three training centers; training costs, including partial per diem for trainees and instructors; evaluation costs; teaching and service materials and equipment; and technical assistance.

The project purpose is to increase the capacity of the MOH to train paramedical personnel (auxiliary nurses, community health workers and empirical midwives) necessary to effectively deliver integrated basic health services.

The major outputs\*\* include three training centers for auxiliaries; trained auxiliary nurses, community health workers and midwives; limited funds for central staff visits to other RHDS systems or seminars; and strengthening of supervision and evaluation systems.

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\*As of 1978 there were 379 CESARs, 76 CESAMOs, 7 CHEs, 6 regional hospitals and 3 national hospitals.

\*\*Taken from the 1979 evaluation and the 1978 and 1979 project agreements.

The Rural Penetration Program is unusual in both the variety of paramedical workers and the division of responsibilities among them. There are five types of paraprofessionals:

- 1) The auxiliary nurse (now called health auxiliary) is found throughout the system, but plays the most essential role in staffing the CESAR (rural health post), which provides health care to communities of under 3,000 persons. The auxiliary receives ten months of training and provides both simple curative and preventive services (health education, MCH and family planning, vaccinations), makes referrals to other levels, and oversees and supplies the community workers. The auxiliary is an employee of the MOH. Almost all are female.
- 2) The health promoter, usually male, is also an MOH employee assigned to a CESAR, and is responsible for initiating community participation and implementing community water and waste disposal projects. The promoter organizes health committees in surrounding communities, each of which elects a health representative. (Promoter training is supported by other programs, particularly environmental sanitation.)
- 3) The health representative, usually a male, is a volunteer community leader trained in a six-day course by the health promoter and auxiliary in motivation techniques and community organization. The representative then works with the promoter to improve environmental sanitation and to promote community gardens and home improvements. The representative's primary duty is to encourage his community to elect a health guardian.
- 4) The guardian is a volunteer who provides services directly to individuals. Guardians receive six days of training from the auxiliary or other area personnel, to prepare them to treat simple diarrhea, colds and parasites and to provide first aid. More complicated cases are supposed to be referred to the auxiliary. Guardians are also trained to give well-baby advice and health and nutrition education. Most guardians are males.
- 5) Empirical midwives (all females) are recruited by the health representative and guardian; they are then trained in a six-day course designed to upgrade their skills and encourage them to link up with the health post by reporting their activities in prenatal care, birth attendance, postnatal care and well-baby and family planning referrals.

The CESAR links the informal health system discussed above with the formal system of CESAMOs and hospitals providing more complex care.

Three training centers, located in Tegucigalpa, San Pedro Sula and Choluteca, train health auxiliaries using a special curriculum designed to prepare them for independent work in CESARs. Training is done by nurses with hospital and rural health experience. The original project design included U.S. training in MCH and family planning for a group of 30 graduate nurses, who would become the instructors for the auxiliaries. Some of these nurses were trained before the design was changed to de-emphasize family planning; there is no information on how many are still serving as instructors. Other instructors have received no special training. The volunteer community workers are trained at the CESAR level (70%), at CESAMOs (25%), and hospitals (5%). The training curriculum for volunteers has been developed independently in each region. Training is done by auxiliaries and registered nurses with no formal teacher training.

### IMPLEMENTATION EXPERIENCE

The following chart describes the project status as of the dates indicated.

#### CURRENT PROJECT STATUS

<u>OUTPUTS</u>	<u>STATUS</u>
1. Construction of 3 training centers (1978).	1. 3 built and operational (1 by 1978, 1 in 1979, 1 in 1980.)*
2. 900 auxiliaries trained (1981).	2. 560 trained by end of 1979 (270 to be trained in 1980.)*
3. 4,000 midwives trained (1981).	3. 2,997 trained.**
4. 5,000 community health workers trained (health representatives and guardians) (1981).	4. 2,542 trained** (about 2/3 guardians, 1/3 representatives).

The construction of the three training centers was delayed for 2 years due to contracting and construction difficulties. Centers are now operating in Choluteca, San Pedro Sula and Tegucigalpa (just completed). Training of auxiliary nurses has gone more slowly than planned because of the delay in opening the training centers, as well as delays in IDB-funded hospital construction.

While the 1979 Project Evaluation Summary (PES) indicates that the project is basically on schedule, with the above-mentioned delays

\*Source - USAID Health Officer

\*\*Source - Health Sector I Project Paper, June 30, 1980 p.9

and shortfalls, the project's focus has changed dramatically since its beginnings. As originally designed, the project emphasized the extension of family planning information and services (along with maternal/child care) as the major objective of the rural outreach program. As a result of political and religious pressure in Honduras, the family planning emphasis was dropped (1977-78), and the project was refocused on primary health care. There is still some family planning for health reasons, but it is de-emphasized in both training and implementation. Population funding has been dropped. Consequently, total AID funding was reduced from the original \$3,027,000 to the current \$1,296,000.\* Family planning is now being supported by AID indirectly through private organizations rather than through direct funding. Family planning is also supported by other organizations. Access to family planning is not restricted, but it is not openly promoted by the GOH. MOH family planning activities are undertaken for health, not demographic reasons, due to political and strategic factors, particularly a desire to maintain or increase Honduras' population along the Honduras-El Salvador border.

Other design changes include an increase in the number of community health workers and decreases in the number of training centers from six to three, in the number of auxiliaries, and in the length of their training from one or two months to one week.\*

Problem areas described by the 1978 special evaluation include the need to improve training course content and methodology, particularly with regard to supervision of community health workers by auxiliaries. The evaluation also noted the need to assign priorities to the skills taught community workers, so that the most important skills are taught through intensive repetition until mastered. It was suggested that a local fund derived from minimal drug fees could be useful for purchasing supplies and covering per diem when the MOH logistic system fails, as it frequently does. This suggestion has not been implemented, nor are there any plans for charging for drugs because the MOH is not set up administratively to handle such a system. A recommendation was also made to have a newsletter to provide incentive for volunteers by reporting their activities as well as general health information.

The 1979 evaluation noted the need to strengthen and expand the supervision of rural health workers; to provide more effective training in developing community participation; and to give increased attention to evaluating the effectiveness of extended rural coverage and the training carried out. The 1980 evaluation has been somewhat delayed; it should be done in September/October 1980.

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\*Changes in project design were pieced together from sources listed under "References."

The most recent information available\* indicates that the auxillary training curriculum still needs more emphasis on developing nonclinical skills, particularly supervision and training of community health workers, fostering community participation and promotion of improved health practices, such as nutrition. Clinical training appears to be satisfactory.

The health sector assessment notes the need for further training of community-level workers. The initial six-day training period was established to allow wider rural coverage, on the assumption that periodic retraining would reinforce and extend initial training. In fact, however, only about one in four of these community-level workers has received any retraining (an additional three days). This partially explains why only about 40% of the volunteers originally trained are still functioning within the MOH system (others may still be functioning informally).

Other factors which have contributed to volunteer dropout are lack of financial incentives, support such as supplies, per diems, equipment, adequate supervision, and recognition. The volunteers currently receive only supplies (somewhat irregularly). Expenses incurred in attending continuing education courses or scheduled monthly meetings with the auxiliary at the CESAR are not covered (per diem is paid only during initial training). Consequently, attendance is low at monthly meetings which compounds supervision deficiencies, since these meetings are intended to provide technical support.

According to a 1980 anthropological study, the lack of financial incentives has been a major problem and has contributed to the high dropout rate: "The idea of voluntary service is foreign to the culture and everyone knows and accepts that no one at any level works without pay or some other form of compensation." At present there is no provision for community financing of volunteer workers, nor is charging for medicines or services permitted by current government regulations.

Recognition is equally important for unsalaried workers. Presently, the community workers receive little, from either MOH personnel or the community. There is still widespread lack of understanding by nurses and physicians of the role and importance of community workers. The rural population is not yet aware of the benefits to be gained from the preventive and promotional activities of community health workers. Both groups need to be made more aware of the role of these new health workers.

The sexual divisions among the various categories of paramedical workers follow traditional cultural norms and appear to work

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\*Sources: Health Sector Assessment (HSA), Health Sector I Project Paper, interviews with project officers.



reasonably well, although some effectiveness is lost by such rigid division of jobs by sex. There are some difficulties in active supervision of community workers and in community outreach by auxiliaries because of culturally-imposed restrictions on female mobility--auxiliaries tend to remain at health posts passively waiting for patients rather than undertaking active promotional activities. It is also very difficult for male health guardians to advise women on maternal/child health, especially family planning.

According to a 1981 study of the project, there has been an increasing tendency toward use of female health workers because they are more likely to work without compensation, and because they are more accessible than males. Men are often away from home working in the fields, and are not available to provide medical care; women, on the other hand, tend to stay at home. The study also reported that, because of the work patterns, it was often the wife, rather than the trained health worker, who ended up providing the health care.

The Health Sector I Loan/Grant (522-0153) currently being considered has been designed to remedy some of the problems encountered during the current project. If implemented as planned, it will provide continuing education for community workers (who will receive small per diem payments) both through formal training programs and less formal education through mass media. The media will be programmed to provide recognition of health worker accomplishments and community projects, as well as augment community health education efforts. The project also will support training for instructors in educational techniques, public health education for MOH personnel, and training and logistical support for supervisors.

Another positive step in the continuing development of the health care system has just been taken: in August 1980 the MOH, with PAHO support, held a one-week seminar in village health worker task analysis, to discuss and rationalize task responsibilities. Results are not yet known but should be noted in the next update on this project.

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## JAMAICA

IDENTIFICATION

Project Name and Number: Health Improvement of Young Children, Number 532-0040

Location: Nationwide (originally just Cornwall County—250,000 people)

Project Dates: FY 1976 - FY 1978

Funding Level and Sources: AID: \$375,000 (grant)

Responsible Offices: Health Officer, USAID/Jamaica  
Bureau for Latin America and the Caribbean, Office of Development Resources, Health and Nutrition Division, AID/Washington

Principal Contractor: Johns Hopkins University (JHU)

Implementing Agency: Ministry of Health and Environmental Control/Government of Jamaica (GOJ)

COUNTRY STATISTICS

Total Population: 2.2 million

Rural Population: <u>50%</u>	Infant Mortality Rate: <u>15</u>
Population Growth Rate: <u>2.2%</u>	Life Expectancy at Birth: <u>70</u>
GNP Per Capita: <u>\$1,110</u>	Adult Literacy Rate: <u>86%</u>

SYNOPSIS

Between its conception and its planned termination, the Health Improvement for Young Children project went through a number of changes. Initially the program components included task analyses of various personnel types, continuing education for health team members, health management improvement, and evaluation. However, decisions made by the GOJ, as well as by AID and Johns Hopkins University, resulted in a project which focused on continuing education. Although the project's scope was significantly reduced during the project life, there were marked achievements in the area that remained.

## BACKGROUND

The island of Jamaica is beset with health problems common to both industrialized nations and developing countries. The principal causes of mortality are diseases of the heart and circulatory system and malignant neoplasm, followed by pneumonia, and diarrheal diseases. In addition, a myriad of socioeconomic problems, including a huge poor class and a high unemployment rate, contribute to Jamaica's health problems. Nutritional deficiencies and inadequate maternal and child health care are major factors affecting the health of children under five. More specifically, malnutrition contributes directly or indirectly to 60-85% of the deaths among children between six months and two years. Adding to these problems is the fact that eighty percent of Jamaica's physicians practice in urban areas; consequently, the rural population which is 55% of the total, is served by only 20% of the available doctors.

Since the late 1960's, however, the GOJ, through the Ministry of Health and Environmental Control (MOHEC), has been working to extend basic health care to rural communities through the services of community health aides (CHAs). An experimental program to train CHAs was begun in 1967 by the University of the West Indies. Simultaneously, Cornell University, at the invitation of MOHEC, initiated a project intended to reduce malnutrition in young children through outreach services. CHAs were trained to provide the necessary services. The CHA program gradually expanded and was felt to be successful. By the mid-1970s, approximately 1000 CHAs had been trained and deployed. Mortality and malnutrition rates were reduced. Consequently, the MOHEC decided to further develop and expand community health services by providing primary health care at the CHA level, backed by supervision by and referral to other members of the community health team. The Health Improvement of Young Children project was designed to be one component of the GOJ's comprehensive, new health plan.

## PROJECT DESCRIPTION

In addition to building upon the Cornell nutrition and UWI CHA programs, the Health Improvement of Young Children project was designed to complement a World Bank Loan to Jamaica for building and equipping 56 new health centers throughout Cornwall County.

From the beginning, it was recognized that because of the health manpower shortage in Jamaica and the unstable economic situation, the only means of implementing the project would be to retrain current staff. Thus, a program of continuing education for approximately 800 health and support personnel became the project's key element.

Originally, the Health Improvement of Young Children project

was designed as a pilot project (in Cornwall County) for the new direction of the Jamaican health delivery system. During the 16 months between the signing of the project agreement and the effective date of the contract with JHU, however, the GOJ determined that training functions should be centralized and coordinated in the MOHEC training unit and that it was not advisable to attempt decentralization at the regional level.

Two consultants recruited by JHU went to Jamaica to assist the project's training activities. One consultant worked with the Chief of the Training Branch (MOHEC) and training coordinators in each parish to identify training needs and to develop training programs. Due to a compromise between GOJ, AID, and JHU, the other consultant was assigned to assist the Cornwall County Health Administrator in implementing the actual retraining of health care providers.

The first phase of continuing education began in 1978. A county committee composed of 25 public health nurses, public health inspectors, health educators and nutritionists was organized and met monthly to determine what topics needed to be included in the retraining program. The result of these discussions was a series of 2 day workshops for 15-22 health team members. Workshops were held throughout the 5 parishes in Cornwall County so that a maximum number of health team members could participate. In addition, trainees were able to come daily by local transportation (participants were given food as well as a travel allowance). In the 6 month course, April through October of 1978, 29 workshops were held which 687 health team members attended. Emergency primary care and a general knowledge of government policies regarding health care were the areas of concentration in the first 2 day session. Later workshops dealt with family planning, sexually transmitted diseases, gastroenteritis, and record keeping.

#### IMPLEMENTATION EXPERIENCE

The final report issued by JHU is titled, Development of A Low Cost In-Service Training Program for PHC Workers in Cornwall County, Jamaica, a more appropriate title than the Health Improvement of Young Children. Four contracts were written in the course of the project, though only two were actually signed, reflecting the numerous substantive changes in the project plans that occurred for both philosophical and financial reasons. A management component and an evaluation component, including a functional analysis, were all eliminated from the project over the course of its three year life. In addition, the fact that centralization rather than decentralization became a goal greatly altered the roles of the consultants and the project plans.

The inservice training program in Cornwall County was a successful effort. Almost every eligible health team member participated in the workshops. Also, over time, the parish training teams became more formalized, gained confidence, and established an on-going momentum. A very specific product of the training is The Casebook of Guidelines for In-service Training of Primary Health Care Teams, written by the JHU advisor in Cornwall County. Very thorough and useful, the document represents a synthesis of experience to provide guidance for those who will be continuing inservice activities in Jamaica and for those who want to initiate such activities in another county and cultural setting. Nonetheless, the training program was not free of problems. Among the most critical is that no position for a primary care inservice training coordinator was developed. Ideally that person would have worked with the advisor for at least a year before taking over her position.

The fact that at times funds designated for the workshops were not immediately available also handicapped the inservice training program. (The minimum cost of a two day inservice training session was \$4.94/person.) As a result, there were shortages of materials and supplies needed for the training workshops. Indirectly related to funding problems was the non-official post of parish inservice training officers. They received neither a stipend nor additional reimbursements for efforts above their normal activities, even though they were expected to participate in the planning, development, and implementation of in-service training programs. At the local level the training committee during the course of its monthly meetings encountered a number of administrative issues and problems. In response to these dilemmas, however, problem solving teams were developed which made visits to various districts within each parish to work out improved management processes.

The JHU consultant who was working at the ministry level assisted members of the Training Branch in planning workshops and seminars and planning for the development of manuals. Many of these efforts are not yet completed. A number of issues impeded progress: (1) the JHU Consultant never had a clear idea of what his responsibilities were; (2) because of limited funds for travel, he was not able to have frequent collaboration with the JHU consultant in Cornwall County, although the two of them needed to be in frequent communication; (3) a shortage of manpower and materials, the training branch was unable to do planning and evaluation; (4) although the training branch is within MOHEC, there are no official posts for training within the Ministry; consequently, training coordinators within the parishes actually have no official position within the MOHEC. Also, the Training Branch is not seen as being the central coordinating point for training within the Ministry. Different program areas with MOHEC plan and implement their own training programs so there are problems of coordination and duplication.

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Doris Storms, JHU, (7/17/81) (7/22/81).

Summer 1980

**NICARAGUA**

**IDENTIFICATION**

Project Name and Number: Rural Community Health Services (PRACS), Number 524-0110

Location: 45 villages in Region V, northeast of Managua

Project Dates: FY 1976 - FY 1980

Funding Level and Source:

Grant:	\$385,000
Government of Nicaragua (GON):	\$268,000
Communities:	\$ 78,000

Responsible Offices: Health Officer, USAID/Nicaragua

Bureau for Latin America and the Caribbean, Office of Development Resources, Health and Nutrition Division, AID/Washington

Consultants: Long-term consultant as field coordinator; several short-term consultants

Implementing Agencies: Ministry of Public Health, Division of Health Education



## COUNTRY STATISTICS

Total Population 2.6 million

Rural Population: 47%                      Infant Mortality Rate: 122  
Population Growth Rate: 3.4%              Life Expectancy at Birth: 55  
GNP Per Capita: \$840                      Adult Literacy Rate: 57%

## SYNOPSIS

The USAID-supported Rural Health Community Action Program is a successful model for involving communities in their own health improvement. The project trained rural health workers to provide services, and established community health committees to both participate in the overall program and execute community-selected health projects. Many project goals were either met or surpassed. The project, begun in 1976, was active in selected regions of Nicaragua until activities ceased in 1979 due to political turmoil.

## BACKGROUND

Nicaragua's people suffer from health conditions typical in developing countries—excessive morbidity and mortality as a consequence of enteritis, communicable diseases, malnutrition and malaria. The high infant mortality rate (estimated at close to 200/1000 in rural areas), life expectancy of 55 years, and other indices of health are worse than expected in a country with a per capita income of nearly \$1000. This situation reflects the unequal distribution of wealth as well as the inadequacy of health services.

In the late 1960s and early 1970s, USAID supported two major health programs, one to establish a network of mobile health units (including boats), and one to construct a network of over a hundred rural health centers. Though in place by the mid-1970s, these facilities had a minimal impact on people's health, due to poor management, inadequate logistics, low drug and equipment availability, poor staff motivation, etc. Health centers were extremely underutilized, and mobile units frequently broke down.

In the mid 1970s, following information supplied by a health sector assessment, USAID decided to support a series of health programs aimed at giving comprehensive support to health sector institutions, at the same time stimulating extensive community involvement. The Rural Community Health Services grant constituted a significant contribution toward this effort.

The political environment in which these activities unfolded is

noteworthy. Attacks and strikes against the Somoza regime that began in October of 1977 broke out in open civil war in September 1978 and May-July 1979, when the Sandinista government came to power. This civil strife caused great disruption to all government programs, as government vehicles and offices were attacked, and many workers were summarily fired when their less than total support of Somoza was suspected. AID's health projects must, therefore, be considered in this context.

#### PROJECT DESCRIPTION

This project intended to develop a community-supported primary health care model for Nicaragua, as well as prepare a group of trained and experienced health educators in the process. The program (called PRACS, Rural Health Community Action Program) was administered by the Health Education Division, one of the best managed units of the Nicaraguan Ministry of Health.

The main objectives of the integrated rural health system were the following:

- train health educators to organize community health committees, supervise community level health workers (rural health collaborators), and assist the committees and collaborators in improving community health;
- train rural health collaborators to deliver basic preventive and curative health services in rural areas;
- establish a community health committee in each target community to support local health activities;
- undertake individual and group preventive health education activities, supported by scheduled radio lessons (listened to and discussed by groups of people called together by health educators or collaborators);
- redesign the curriculum for health educators and strengthen the curriculum for rural health collaborators; and
- improve the administrative support system for rural health programs, including coordination between relevant CON agencies

Rural health collaborators were selected by local village health committees to attend a two-month course in basic medicine and community organization. Criteria for selection included literacy. Preference was given to women and to traditional health workers. The collaborators were not paid a salary, although the issue of financial incentives arose soon after they were in the field. Collaborators provided preventive and simple curative health services, coordinated actions of health agencies, and assisted community committees in detecting local health problems and initiating collective

solutions.

Community health committees conducted an analysis of health problems and resources in each community; undertook community action projects (wells, latrines, health post gardens, vaccination campaigns, etc.) which enlisted the participation of many citizens; and participated in quarterly and annual evaluation meetings on the community health program. Health educators and local health center staffs provided technical and administrative support to the collaborators and committees.

The basic coordinating elements for the MOH were rural health educators trained by the project to activate and supervise the health committees, collaborators, and community projects. They promoted the initial formation of village health committees and the collective establishment of community health plans. Educators also advised CHCs on obtaining economic and technical resources; and they offered health education through radio programs.

Common project activities aimed at improving nutritional status were the promotion of family and school vegetable gardens, and the organization of mothers clubs to educate members in food handling and preparation. Health promoters gave special emphasis to encouraging breastfeeding. Fertile age and pregnant women were identified and offered prenatal, delivery, and postnatal assistance and education.

#### IMPLEMENTATION EXPERIENCE

Until project activities were halted by political events in 1979, substantial progress had been made. The first class of approximately 20 health educators and many collaborators were in the field and working. Additional training and project expansion into new villages was underway.

By stimulating significant community participation and decision-making as part of a regional health program (particularly under an authoritarian government), PRACS was becoming a noteworthy model for rural health improvement in Latin America. Nonetheless, problems emerged. When the program was about to complete training activities in the initial project area (Esteli), the staff realized that the promoters, CHCs, and health educators had been working too independently of the Ministry of Health's district health centers. A special program was subsequently devised to involve other Ministry personnel and to open regular communication between them and the communities.

The radiophonic school proved to be an effective method of transmitting health information, though only after some design and methodological inadequacies (including the lack of adequate pretesting) were corrected.

The main factors contributing to this project's success would seem to be competent project and AID staff combined with well-planned community participation. PRACS is an example of the infrequent centrally-planned project that encourages genuine community input and decision-making. However, because of the political disruptions, the long-term effectiveness of this model for Nicaragua could not be proven.

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### Interview:

Anselmo Bernal (by phone), LAC/DR, AID/W.

## NICARAGUA

IDENTIFICATION

Project Name  
and Number: Rural Health Services,  
Number 524-0126 (loan)

Rural Health Institutional  
Development, Number 524-0014  
(grant)

Location: The rural poor in Regions II and  
IV (south and northeast of  
Managua)

Project Dates: FY 1976 - FY 1980 (grant)  
FY 1976 - FY 1978 (loan)

Funding Level  
and Source: AID Grant: \$472,000  
AID Loan: \$5,000,000

World Bank loan for PLANSAR in  
other regions, PAHO consultants

Responsible Offices: Health Officer, USAID/Nicaragua

Bureau for Latin America and the  
Caribbean, Office of Development  
Resources, Health and Nutrition  
Division, AID/Washington

Consultants: Long-term consultant on hospital  
equipment maintenance; several  
short-term consultants

Implementing Agencies: Ministry of Public Health (MOH)

## COUNTRY STATISTICS

Total Population: 2.6 million  
Rural Population: 49% (1980)      Infant Mortality Rate: 122 (1977)  
Population Growth Rate: 3.1%      Life Expectancy at Birth: 55 (1978)  
GNP Per Capita: \$840 (1978)      Adult Literacy Rate: 50% (1979)

## SYNOPSIS

The Rural Health Services Loan is an ambitious project to strengthen the Nicaraguan Government's ability to deliver health services by stimulating community health improvement projects in 300 communities, training multiple levels of health personnel, and creating more effective hospital care to receive referrals from lower levels of care. The program experienced both successes and problems before being called to a halt by political changes in 1979 and after the Frente Sandinista gained control of the government.

## BACKGROUND

The background information for this project may be found in the previous project summary. The loan and grant described here support a series of health programs aimed at giving comprehensive support to Nicaragua's health sector.

## PROJECT DESCRIPTION

The Rural Health Services Project consists of three main components: rural community action, human resources development and a referral system development. The various components of this ambitious health development plan started off at different rates of success. However, because of political turmoil and the change in government, all phases of this project were suspended in 1979. AID negotiations with the new national government have moved slowly: at present activities are mostly at a standstill. This synopsis describes the original activities financed by the loan and the changes which the new government of Nicaragua would like to make in the focus and scope of the loan program. As of this writing the Government of National Reconstruction (GRN) is reviewing the amendatory loan agreement. The Institutional Development grant activities will also be described.

### Component I -- Rural Community Action

The original objective of this component was to improve rural health conditions in selected regions of the country with a combined population of 160,000 by: (1) using health educators/community organizers trained under the Rural Community Health Services Project (524-0110) to educate and organize communities, which select their

own health workers, called rural collaborators, to be trained by the project; and by (2) providing technical assistance and contributing some materials for community improvement projects, chiefly wells, latrines and immunizations.

Despite innumerable difficulties, including severe civil strife in areas of this project, PLANSAR (the implementing agency) has continued to move forward. It has organized 150 communities (average of population of 250), constructed nearly 15,000 latrines in 121 communities, and completed 79 community water systems. For these projects, PLANSAR provided materials and technical assistance, and the community residents contributed their labor. The Project paper calculates that community resources to be mobilized for these projects would cover 10% of project costs. The community health committee has responsibility for assuming the proper use and maintenance of these facilities.

### Component II -- Human Resources Development

This component supports the training of community-level health promoters, midwives, auxiliary nurses and other types of health manpower. The principal outputs are the construction of a National Health School (NHS) and associated mobile teaching units; appointment of a director and staff; curriculum development for the school; and establishment of a continuing education program for various categories of health personnel.

Long delays in purchasing land for the NHS limited the progress of this component, though curriculum development is well-advanced.

The Ministry is committed to the use of mid-level practitioners for rural services and plans to invest the funds remaining in Component II into the construction of a "polytechnical" health school in Managua and a subsidiary training center in Bluefields. At the polytechnical school the Ministry will train 10-14 different categories of health auxiliaries and technicians while the Bluefields school will be limited to training auxiliary nurses and health promoters. Financing for scholarships, curricula development, teaching materials and teacher training will be provided by other donor agencies such as PAHO.

### Component III -- Referral System

The objectives of this component include the development of a preventive maintenance system for health facilities, and the purchase of equipment for selected hospitals. This component is designed to develop the capacity of the Ministry of Health to repair and maintain essential hardware located in government hospitals and clinics. To accomplish this goal, the loan financed the construction of 7 regional maintenance centers, the training of technicians, the procurement of tools and equipment and other activities to strengthen the hierarchy of maintenance services. The Central Maintenance Complex has been and will continue to be supported as a center for specialized (tertiary) repairs and maintenance, central warehouse and site for training technicians in the repair and



intenance of hospital equipment. Regional subcenters provide second-tier maintenance and repair services and are staffed by permanent technicians and consulting technicians from the Central Maintenance Complex. Any repair and maintenance work which cannot be handled by the hospital-based repairman is communicated to the regional center where a decision is made regarding the site, type of technician and spare parts or tools needed for the job. Under the new program, AID will equip five regional subcenters, 212 hospital-based maintenance shops and the procurement of vehicles.

#### Institutional Development Grant

This grant was to complement the loan components of the Rural Health Services Project and expand upon them by supporting management development, an information system and program planning capacity; developing skills in emergency care, MCH and radiological diagnostic techniques; and establishing of continuing education programs for the health sector. In mid-1978 an innovative rural health evaluation project component of \$90,000 was funded under the same grant No. 524-0114. However, due to the changing priorities which arose after the revolution, these funds were reprogrammed for emergency procurement and services.

#### IMPLEMENTATION EXPERIENCE

An unusually complex package, this Rural Health Services/ Institutional Development project has advanced toward many of its goals. Nevertheless, there have been some problems in planning and managing the project. Before activities were suspended due to civil strife, Component I (which most directly benefits the rural poor) was progressing satisfactorily, and Component III (which least benefits the rural poor directly) was encountering problems. Serious delays in contracting for technical advisory services slowed down implementation of the project and forced postponement of an evaluation scheduled for June 1977.

In February 1979, an AID consultant visited these projects and reported on their status. The following chart summarizes his findings.

#### CURRENT PROJECT STATUS\*

<u>OUTPUTS</u>	<u>STATUS</u>
<u>COMPONENT I: Rural Community Action</u>	
1. Organization of communities for community action (300) by end of 1980	

\*Source: Kenneth R. Farr (consultant report), 3-1-79.

OUTPUTSSTATUS

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>a. Develop PLANSAR staff of educators and promoters to organize committees</li> <li>b. Organize CHCs and plan community projects</li> <li>c. Incorporate the community health collaborators from PRACS* into PLANSAR</li> </ul> | <ul style="list-style-type: none"> <li>a. PLANSAR has a paid staff of 4 health educators and 15 promoters</li> <li>b. '50 communities organized</li> <li>c. 45 collaborators now working in PLANSAR communities</li> </ul> |
| <p>2. Construction, operation and maintenance of water systems and latrines in rural communities of 50-800 people..</p>  |  |
| <ul style="list-style-type: none"> <li>a. Construct 10-11,000 latrines by December 1980</li> <li>b. Construct water system for 300 communities of over 240 people each by 1980</li> <li>c. Maintain community water systems in operating condition.</li> </ul>         | <ul style="list-style-type: none"> <li>a. 14,858 latrines in 121 communities built by December 1980</li> <li>b. 79 communities have water systems completed</li> <li>c. No information.</li> </ul>                         |
| <p>3. Immunization program in rural communities</p>  |  |
| <p>3. No information.</p>  |  |

COMPONENT II: Development of Human Resources for Health

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>1. Construct a National Health School</li> </ul>  | <ul style="list-style-type: none"> <li>1. Site selected; land surveyed; Government budget approved</li> </ul>                                |
| <ul style="list-style-type: none"> <li>2. Draw up curricula for different health personnel (not included in reformulated loan program)</li> </ul>  | <ul style="list-style-type: none"> <li>2. Drafts completed and being revised</li> </ul>  |
| <ul style="list-style-type: none"> <li>3. Hold continuing education courses           <ul style="list-style-type: none"> <li>a. For health executives</li> <li>b. On emergency and intensive care, with the University of Miami</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>a. First one held in 1978</li> <li>b. Coordination with Miami started, curriculum drawn up</li> </ul> |

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\* Health Education Division (MOH) community health project

OUTPUTSCURRENT STATUS

- |  |  |
|--|--|
| c. On technology for special education for health sciences<br>(not included in re-formulated loan program) | c. Requested PAHO assistance                     |
| d. For X-ray technicians<br>(not included in re-formulated loan program)                                   | d. First intensive course given in 1978          |
| e. For supervisors<br>(not included in re-formulated loan program)   | e. Being planned                                 |
| f. For mobile units' staff<br>(not included in re-formulated loan program)                                 | f. Completed planning for vehicle specifications |

COMPONENT III: Referral System

- |   |  |
|---|--|
| 1. Develop referral system<br>(not included in re-formulated loan program)                        | 1. Referral plan written                                       |
| 2. Develop maintenance system that includes preventive and predictive maintenance                 | 2. 7 maintenance subcenters constructed, small tools purchased |
| 3. Equip hospitals with necessary medical support<br>(not included in re-formulated loan program) | 3. Priority needs for 10 hospitals elaborated                  |

The Rural Community Action Component of the Rural Health Services Project has been handicapped by a lack of transportation, in part due to extensive down time for vehicles. Allotted funds have been insufficient to purchase needed tools, spare parts, and vehicles. This lack of materials and spare parts may be "attributed to several factors, including low production of this material (in Nicaragua) and bad credit due to the former PLANSAR Administrator who left large unpaid debts" (AID Monthly Status Report). The most serious shortcoming in this component, however, has been the lack of a maintenance program for the water systems installed: neither PLANSAR staff nor community people are sufficiently trained in maintenance procedures, and there is insufficient money for repair parts. Another major problem encountered by PLANSAR is a common shortcoming of such programs—difficulty in coordinating with INVIERNO, an AID-supported

integrated rural development project operating in the same geographical region. In many communities, both organizations have established community committees, greatly confusing the people.

The Human Resources Development Component of the project has encountered long delays in purchasing land for the National Health School, and disagreements on such issues as the size of the school, the need to construct dormitories, and the categories of health workers to be trained. In part because of these delays, the project money allocated will now be insufficient.

The Referral System Component has faced serious coordination problems, both internal and with other project components. The National Maintenance Center operates on its own, while the National Social Welfare Board (which coordinates public hospitals) is concerned with hospital equipment purchase. Both of these activities are almost totally outside of the Ministry of Health's coordination efforts. The National Maintenance Center has suffered from a lack of qualified technical leadership and a very rapid turnover of Directors. Its staff is poorly prepared and receives relatively low salaries. Thus, it is questionable whether the National Maintenance Center is developing a preventive as well as restorative maintenance capacity to permit proper utilization of tools and hospital equipment being financed.

The Institutional Development Grant never really got started, in part because of insecurity in rural areas, and in part because of the lack of USAID/Nicaragua health staff to monitor evaluation research (the staff had been reduced because of the political situation). Since the civil war, project agreements have been amended to provide financing for short-term courses and technical assistance. Training has been supported by the grant in areas such as the registry of vital statistics; epidemiology and norms for malaria control. Funds also are available for technical services for malaria control, architectural and engineering services (Component II) and geologic studies (Component II).

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Comments on first draft by Paul Cohn, Chief, Health & Nutrition  
Division, USAID/Nicaragua.

### Interview:

Anselmo Bernal (by phone), LAC/DR, AID/W.

NICARAGUA

IDENTIFICATION

Project Name and Number: East Coast Health Delivery Number 524-0143

Location: 50 miles radius of Puerto Cabezas on the northeastern coast.

Project Dates: FY 1977 - FY 1980

Funding Level and Source: USAID: \$224,000  
Partners of the Americas: \$65,000

Responsible Offices: Health Officer, USAID/Nicaragua  
Bureau for Latin America and the Caribbean, Office of Development Resources, Health and Nutrition Division, AID/Washington

Implementing Agencies: Wisconsin-Nicaragua Partners of the Americas.

COUNTRY STATISTICS

Total Population: 2.6 million

Rural Population: 47% Infant Mortality Rate: 122

Population Growth Rate: 3.4% Life Expectancy at Birth: 55

GNP Per Capita: \$840 Adult Literacy Rate: 57%

SYNOPSIS

The East Coast Health Delivery Project has expanded and improved an already-established PHC program in isolated, sparsely populated eastern Nicaragua. Despite disruptions caused by civil strife, the project has progressed toward its goals, and has made efforts to deal with earlier administrative and organizational problems.

## BACKGROUND

Eastern Nicaragua contains half of the country's land area but only 8% of the population—largely Caribbean Blacks and Misquito Indians living in small villages. This is a vast, isolated area, with no road connection during most of the year to the more populated Pacific side of the country. Most local transport is via river or the Caribbean. The area is economically depressed in the wake of the declines in banana and lumber exports. Most of the inhabitants are subsistence farmers.

Historically, the East Coast has been neglected politically, and thus has received only a modest amount of government development resources. Several private groups, however, including the Moravian and Catholic churches, have provided some health care and other services.

In 1964 the Wisconsin-Nicaragua Partners of the Americas program was established to facilitate and encourage people-to-people activities between citizens of Nicaragua and of the state of Wisconsin. In 1969, the University of Wisconsin and the Partners, spurred by the interest of a U.S. physician who had worked for many years in the Moravian Hospital in Puerto Cabezas, organized some small scale rural health programs and field experiences for U.S. medical students in communities and clinics along Nicaragua's east coast. In 1971, MUCIA, a consortium of U.S. Midwest universities, joined in support of these programs. Over the years the "Wisconsin Project" worked with local health care providers and collaborated closely with the Ministry of Public Health in rural health service delivery and operations research.

Gradually a network of a half dozen health clinics (connected by two-way radio) was established over a large part of eastern Nicaragua. The clinics were operated by local auxiliary nurses (and a few Peace Corps Volunteers) trained in Puerto Cabezas and supported by visiting medical students and Ministry of Health personnel. The buildings were constructed by the communities, with some outside funding, including money from USAID/Nicaragua's Special Project Fund. In the clinic communities and in some 30 other villages, community health committees were formed. Village health leaders, nutrition leaders, and traditional midwives, trained and to a limited degree supported by the project, served in many villages.

This community health improvement model was fairly well in place by 1976, but several problems remained: deficient and insecure funding; difficult transportation; limited on-site supervision; insufficient coordination and collaboration among the Wisconsin Project, the Ministry, and various other small programs active in the region. AID's operational program grant (OPG) to this project was designed both to respond to these problems and to explore the possibility of replicating certain aspects of the project.

## PROJECT DESCRIPTION

The general purpose of AID support to the Wisconsin/Nicaragua Partners is to facilitate the refinement of a model regional community health program which would provide an alternate method of providing basic health services designed to improve the population's health and nutrition status.

The East Coast Health Delivery Project strives to serve as a primary health care model for regions in Nicaragua and other developing countries with similar environmental and socioeconomic characteristics--widely dispersed villages with meager agricultural resources, low but rapidly growing population, deteriorating subsistence economy, isolation from the national center, and poor transportation. It is hoped that particularly such project components as the following might be replicable:

- certain aspects of program organization, e.g. use of locally trained midwives for imparting preventive health education, and use of health and nutrition leaders chosen by community health committees to help villagers improve their own health status;
- specific applications of appropriate technology, e.g., use of solar powered two-way radio for health referrals and administrative communications; and
- regionalization of health services

Major project tasks include the following:

- I. Complete the establishment of the community-based low cost health care system, using indigenous workers, trained within the region to provide primary health care, supported by a regional infrastructure of health referral, training, supervision, and supplies. The regional system should eventually become fully integrated into the national system.
- II. Analyze and evaluate:
  - 1) The development of community-based services with community participation.
  - 2) The establishment of regionalized health services that integrate community-based health activities and provide linkages with the national health care system.
  - 3) The coordinated training of a community health team that includes community-based health workers, auxiliaries, nurses, and physicians.



- 4) The impact of community-based services on health status in the region.

At the completion of this project, the Wisconsin/Nicaragua Partners hopes to have developed:

- . Health committees with active village participation and village health workers functioning in 90% of the villages.
- . A Regional Health Council to coordinate community health services and regional health programs.
- . Village health posts, outpatient clinics, and a referral system to regional hospitals.
- . Programs for training and supervision of village health workers and other health personnel within the region.
- . Regional collaboration of health services administration to coordinate training, supplies, and financial affairs of the program and to provide linkages between local community-based activities and the national government.
- . Research projects on major aspects of the operational project.

#### IMPLEMENTATION EXPERIENCE

Despite the political turmoil of the past few years, and despite a few internal project problems, the East Coast Health Delivery Project has progressed well towards its objectives. A current status report, relayed by the U.S. director, is as follows:

1. Eighty percent or more of the villages in the project areas have community health committees that support the villages health workers (health leaders and nutrition leaders) and plan and implement community health projects. Annually, the central project staff and each village committee conduct a survey of health and nutrition status. Results are reported to the population at large in an open meeting, at which the people confirm the old or elect new health leaders. This process is extremely valuable in maintaining community participation and awareness of the health programs. It also enables project staff to become intimately aware of health conditions and people in the villages. Committees are currently overseeing the installation of wells in approximately 20 villages.

2. Ninety-two percent of villages have health leaders. At least three initial or refresher courses are held each year in Puerto Cabezas, and other courses are held in the health clinics in various parts of the region. The latter tactic has helped the health clinic staffs assume more supervisory and referral roles in the villages that they serve.
3. The new Sandinista government has taken over many FJO health facilities throughout Nicaragua, including the two (Moravian) hospitals in the project area. A Ministry of Health regional health coordinator has responsibility for the hospitals, health posts, health clinics, and mobile units. This new structure has for the most part taken over from the regionalization movement that the project had started by founding a Regional Health Council (1979) responsible for coordinating and planning all health activities within the region.
4. U.S. medical students have conducted over 30 research projects in such areas as nutrition surveillance, water supply and tuberculosis screening. The project intends but has not yet been able to arrange for the fuller participation of the Nicaraguan medical school in rural health operational research.
5. Various forms of appropriate technology have been introduced and worked well, including oral rehydration therapy for diarrhea and solar battery powered two-way radios.
6. A regional radio station, separate from but related to the project, transmits health and agriculture messages (in English, Spanish, and Misquito) and has been extremely popular.

Besides the disruptions caused by political unrest and the changes brought on by the new Nicaraguan government, the project has suffered somewhat from organizational problems, primarily engendered by the fact that it was partially managed from a distance (Wisconsin). The person responsible for authorized disbursement of funds was also in Wisconsin, communicating with the project staff via not always reliable two-way radio. The shifting of responsibilities to Nicaragua is planned to occur early in a follow-up project (see below).

A second area in need of improvement early in the project was staff capabilities in such areas as management, planning, budgeting, communications, and information collection. The staff was very service oriented and found it difficult to make long range plans, to

see the value of research, etc. The local project manager was scheduled to go to the United States for advanced management training when the civil war intervened in 1978-79. During the past year, planning, organizational and data collection skills have been sharpened considerably through experience.

USAID has recently approved an extension of the East Coast Health Delivery Project. In the new project, supervision and accountability will rest with the local Wisconsin/Nicaragua Partners committee in Puerto Cabezas, a change consistent with the concept of local supervision and direction of Partner projects. This strategy should encourage local responsibility for the programs, and should enable the programs and activities to be based upon local perceptions of needs and priorities. The Partners from Wisconsin will continue to provide services, consultation and resources when requested.

REFERENCES

APHA staff personnel observation, 1976-1978.

Latin America Bureau project file.

Interview:

Dr. Ned Wallace (by phone), U. of Wisconsin, August 31, 1980.

PANAMA

IDENTIFICATION

Project Name and Number: Rural Health Delivery System, Number 525-0181

Location: Nationwide

Project Dates: FY 1976 - FY 1981

Funding Level and Source: AID Loan: \$9.5 million  
Government of Panama: \$8.7 million

Responsible Offices: Health Officer, USAID/Panama  
Bureau for Latin America and the Caribbean, Office of Development Resources, Health and Nutrition Division, AID/Washington

Contractor: No major contractor for the bilateral portion of this loan

Implementing Agencies: Ministry of Health, Government of Panama

COUNTRY STATISTICS

Total Population: 1.8 million

Rural Population: 46% Infant Mortality Rate: 47

Population Growth Rate: 2.5% Life Expectancy at Birth: 70

GNP Per Capita: \$1290 Adult Literacy Rate: 78%

SYNOPSIS

This follow-on project to AID's Health and Nutrition Loan (0040) continues support for health workers training, health post

construction, potable water and sanitation activities, community gardens, and small animal projects. Mid-term evaluations show that water and sanitation activities are the most successful component of the project, whereas community nutrition efforts show more limited accomplishments.

#### BACKGROUND

Since 1968, the Government of Panama (GOP) has undertaken an ambitious program to extend health services to rural populations while encouraging community participation through the formation of local health committees that assist in planning and implementing of health projects. The task is formidable, as the rural population is so dispersed—in 1970 there were 6,500 communities of between 50 and 500 persons. A health sector assessment showed that rural people are underserved by health services and show higher rates of mortality and morbidity due to infectious diseases and malnutrition than do urban populations. In 1972 AID authorized a \$3.8 million loan to assist the (GOP) in extending health services and potable water projects for underserved rural populations. The present Rural Health Delivery System (RHDS) project loan is a continuation of that effort.

As part of a broad community development policy for the country, the government has made a real effort to integrate agricultural, water, and health projects. Primary health care projects are situated in the zones designated as "community development" zones by the Ministry of Planning, to facilitate integrated rural development.

#### PROJECT DESCRIPTION

The purpose of the present Rural Health Delivery System (RHDS) project is to strengthen and expand the GOP's public health system by supporting the construction of health facilities, the training of additional health personnel, the construction of wells, aqueducts and latrines, and the improvement of nutrition in selected regions.

#### Community Participation

The project was designed to involve the communities in resolving health problems. Initially, the MOH was responsible for motivating the community and organizing community health committees. These groups are expected to stimulate awareness of health problems, administer funds, and encourage attendance at health clinics, especially for vaccinations and prenatal care. The health committee is also supposed to work with health assistants in devising solutions to health problems and implementing activities. Furthermore, the committees are expected to assume responsibility for identifying and solving problems in upkeep and general repair of health posts and health centers. The record of participation of these communities in public health projects has generally been excellent (in the antecedent project).

## Health Assistants

The project planned to train 225 health assistants to provide preventive and promotive care at the community level. These workers were selected by the community, selection criteria included completion of primary school, over 18 years of age. Sex was not a criterion. Duties of the health agent include: vaccination, first aid, maternal child care, family planning, promotion of environmental sanitation, nutrition, and community development. The health assistant is also expected to assist in organizing the construction of aqueducts, wells, latrines and other sanitary infrastructure. Health assistants are paid a salary by the MOH ranging from \$60-\$100 per month.

The health assistants are supervised by doctors, because in the two year pilot project in Bocas del Toro Province, superior results were obtained using M.D.'s rather than either nurses or auxiliaries. Supervision will be facilitated on a continuous basis through radio communications during the health center working hours.

### IMPLEMENTATION EXPERIENCE

Mid-term project evaluations of the various elements of this project indicate that the water and sanitation components are the most successful, while community nutrition had made the least progress. Training and construction had proceeded slowly. The USAID mission recently reported, however, that nutrition projects are currently progressing well. The following table presents data on the progress made in carrying out project activities:

#### REDS Project Status - October 31, 1980

<u>Activities</u>	<u>Number Planned</u>	<u>Number Completed</u>	<u>In Progress</u>
<u>Health facilities construction and Equipment:</u>			
Health posts	225	52	75
Health sub-centers	14	6	8
Health centers	4	2	2
Remodeling	11	5	6
Periurban Health Centers	4	0	4
<u>Health Personnel Training:</u>			
Health assistants	225	218	0
Nurse auxiliaries	200	397	0
Sanitary inspectors	20	20	63

Environmental Health:

Aqueducts	300	312	60
Hand pumped wells	400	400	0
Latrines	899	899	0

Nutrition:

Community gardens	48	60	-
Small animal projects	75	46	-

Potable Water

According to a 1976 MOH study cited in the RHDS project paper, potable water and environmental sanitation are the interventions that have had the greatest impact on health status in rural Panama. The MOH study found marked decreases in diarrhea (67%), parasites (65%), and typhoid (64%) in villages which built safe water supply and excreta disposal systems. GOP activities in water and sanitation were partially supported by an AID loan, and continue under the RHDS project. They are slated for a special impact evaluation in the fall of 1980 to be carried out by the AID Health Evaluation Group (the Bennet initiative).

The MOH has received some 1000 applications from rural communities wishing to build piped water systems under a government program in which the MOH and AID supply materials and technical help, and the communities contribute the labor. The MOH builds upon this interest by making the construction of latrines or privies a condition for initiating the water project in each community.

In 1977 a report on water projects partially funded by the health loan preceding the RHDS project, a consultant described the MOH method as follows:

The aqueducts...have an almost perfect record. In these systems piped water is supplied to within ten feet of each dwelling for residents who agree to pay the nominal community established maintenance fee and appoint a local maintenance person. Already some 500 have been constructed. The MOH carries out negotiations with communities before approving the installation consisting of an agreement of latrine installation in each dooryard...a pledge to pay water use fees...and that pipes will be installed by the community under MOH supervision.

The communities must actively participate in constructing their water supply systems by providing 20% of the total cost of the work (including labor). They must agree to take care of the equipment, tools and materials used in construction, and to administer, operate



and maintain the aqueducts with supervision from the MOH. None of the preceding projects has failed. Pumps have been repaired equipment-upgraded, and lines extended.

The environmental health segment of the RHDS project and the previous Health and Nutrition Loan, have been selected for a special impact evaluation study by the Inter-Agency Health Evaluation Working Group during the summer of 1980.

### Latrines

Safe excreta disposal is a key element in the control of infectious diseases and parasites. Under the RHDS project, AID reimburses the MOH \$31 for the costs of materials used in the construction of each latrine.

The MOH provides these materials free to villagers who contribute their labor in building the latrines. A spot check by AID's Auditor General found that most latrines built under the terms of the RHDS project were not built to AID and MOH specifications for dimensions of the pit or base of the structure. For example, the slab over the pit was often built with one bag of cement and small reinforcing rods instead of the two bags and heavy rod specified by AID and MOH. Other structures had been built prior to the RHDS project and were thus ineligible for repayment. Inspection procedures prior to reimbursement were also found to be lax. To the credit of AID and MOH planners, flexibility was permitted in the materials and design of the latrine housing, seat and cover: this resulted, however, in a great variety of structures and made the job of latrine inspectors more difficult. Problems with this component led AID to transfer some funds from it to periurban health center construction.

### Nutrition

The nutrition component of the RHDS project focuses on developing community gardens and small animal projects. According to a September 1978 evaluation of the RHDS project, the mixed progress in nutrition activities (see table) is due to internal organizational factors in the MOH--specifically to a lack of organization in the Nutrition Division. Similar nutrition activities carried out under the preceding Health and Nutrition Loan were only partially successful. A consultant who evaluated those activities found that of the 200 gardens established under the project, about 135 remained. Chief among the reasons for failure of the gardens was insecure land tenure; that is, the owner of the land wanted it back as soon as it was known to be productive. Poultry and egg projects under the previous project were found to be successful as income producers. Since no food consumption study was done, it is unknown whether egg consumption among the poor increased as a result of the poultry and egg projects.

### Health Centers

Construction of health facilities under the RHDS project has been slow. Explanations for the delay vary. AID's Auditor General speculates that it may be due to the large number of facilities involved. "It is probably the most massive construction effort the Ministry (of Health) has ever attempted, and consequently there has been a period necessary to improve their capabilities." The author of the September 1978 evaluation of the RHDS project attributes the lack of progress to a reluctance to construct buildings without staff or equipment to go with them.

### Training

The table on RHDS project status presented in the Project Description shows that a greater number of nurse auxiliaries and a smaller number of health assistants have been trained than planned. Project documents available in Washington do not discuss the success of community participation in the project, nor do they provide information on the actual day-to-day activities of health workers. Interviews with persons familiar with the project indicate that drop out rates in one of the provinces are high (50%) although no reasons could be provided. An evaluation of the RHDS project scheduled for the spring of 1980 has been delayed.

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Document of the Agency for International Development. Washington,  
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Rice, Harold. Trip Report. Consultant to USAID/Panama, February  
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Comments on first draft by Herbert Caudill, Jr., Chief, Health  
Programs, USAID/Panama.

### Interview:

Abby Bloom, AID/Washington on July 31, 1980. Ms. Bloom was an  
International Development Intern in USAID/Panama until June  
1979.

PERU

IDENTIFICATION

Project Name and Number: Extension of Integrated Primary Health, Number 527-0219

Location: Nationwide

Project Dates: FY 1979 - FY 1981

Funding Level and Source: USAID loan: \$5,800,000  
grant: \$1,350,000

Government of Peru (GOP): \$2,400,000

Responsible Offices: Health Officer, USAID/Peru  
  
Bureau for Latin America and the Caribbean, Office of Development Resources, Health and Nutrition Division, AID/Washington

Principal Contractor: Management Sciences for Health (MSH)

Implementing Agencies: Ministry of Health, ORDE-ICA Health Region

COUNTRY STATISTICS

Total Population: 17.6 million

Rural Population: 33% Infant Mortality Rate: 92

Population Growth Rate: 2.8% Life Expectancy at Birth: 56

GNP Per Capita: \$740 Adult Literacy Rate: 72%

SYNOPSIS

The Extension of Integrated Primary Health Project focuses on strengthening and extending basic health services to all health regions of the country through the use of trained and supervised health workers, community educators, support of

sanitation activities, and the establishment of a health care information system. The National Plan for Primary Health Care and ten Regional Operational Plans were completed by December, 1980. Disbursement of funds to implement these plans was expected to be made by January, 1981.

## BACKGROUND

Peru's health problems are more severe than the Latin American average and are partially the result of a maldistribution of income which has complex social, political and economic origins. Moreover, difficulties in communications and imposing geographic barriers impede the delivery of health services to rural areas and further complicate the health situation for a large segment of the population. The uneven distribution of public health services (Lima consumes approximately 70% of the public sector resources in health) serves to intensify health problems of the rural and urban fringe populations.

Approximately 50% of deaths in rural areas occur among children under 5 years old. The principal causes of death are infectious and parasitic diseases which are amenable to control by immunizations and sanitary measures. Gastrointestinal and respiratory diseases are the major causes of morbidity and mortality in the entire population. All of these diseases are complicated by malnutrition which is an associated factor in approximately 60% of the total deaths of children under five years of age.

The social security system provides preventive and curative health care to insured workers, and the armed forces does the same for its members. The MOH is responsible for providing health care to the remaining majority of the population. The existing MOH infrastructure is constrained by the lack of resources, especially the regional and local levels. The efforts of the MOH centers on the necessity of extending the existing health care structure into the rural areas in order to reach the unserved and underserved population. The GOP has developed a plan of primary health care assistance to accomplish this objective with the limited resources available. In the Peruvian context, primary health care includes (a) simple curative and preventive services, e.g., immunizations, family planning, prenatal services, and (b) community development activities such as environmental sanitation. According to MOH planners, the Peruvian national primary health care plan proposes to provide basic health services to the estimated six million people currently having no access to health care services.

## PROJECT DESCRIPTION

The project purpose is to extend basic health services to the rural and marginal urban population and to strengthen these services through such measures as supporting community sanitation education and assisting the MOH in strengthening its information system and its health manpower training.

Specific numerical targets for this project are the following.

Trained health auxiliaries	1,041
Trained and equipped promoters	4,284
Trained and equipped midwives	4,284
Completed and reinforced health posts	1,041
Health centers	520
Protected wells	1,800
Installed latrines	3,600
Improved housing	1,500

The project outputs consist of the development and implementation of a system of primary health care extension that includes the following elements: 1) provision of basic health services in rural areas; 2) community education and support of basic sanitation activities; 3) training and supervision of health workers; 4) establishment of a basic health care information system; and 5) studies, evaluations, and technical assistance.

### 1) Rural Health Services

Utilizing health auxiliaries, community promoters, and nurse-midwives, the MOH will extend preventive services and simple curative services to mothers and children in isolated rural communities. The services will include immunizations, prenatal care, family planning information, oral rehydration, TB control, and health and nutrition education. Also included in this component is the provision of medicines, basic medical equipment and transportation.

### 2) Community Education and Support to Sanitation Activities

This component provides basic materials and equipment needed to assist in the development of simple health education actions at the community level in such areas as basic hygiene,

nutrition education, family planning, waste disposal, and the extension and protection of water systems.

### 3) Training and Supervision

The project supports training of health workers at three levels. Initial training focuses on health auxiliaries. These MOH employees, currently staffing rural health posts have received up to six months of training. They will receive refresher courses that emphasize supervision and family planning information. Approximately 4,200 community health promoters constitute the second group of personnel to be trained. They receive four weeks of training that include vaccination and family planning techniques, and identification and treatment of respiratory diseases and helminthic infestations. The third set of training courses focuses on approximately 4,200 traditional midwives who will participate in a fifteen day program designed to improve their knowledge of maternal and child health.

### 4) Information System, Studies and Evaluation

Working under the technical assistance component of the project, short term consultants will assist the MOH in strengthening its capability (a) to collect, process, and analyze data for management of the primary health care system; (b) to investigate and assess major health and nutrition problems at the national and regional levels; and (c) to monitor and evaluate project components on a routine basis and conduct a final, end of project evaluation along with AID staff.

In accordance with national policy, the General Directorate of Health Programs located in the MOH will oversee project activities. Each health region will implement project activities under the guidance of the central Ministry.

## IMPLEMENTATION EXPERIENCE

Peru's recent economic difficulties have severely affected the health sector, although import restrictions which curtailed the provision of drugs for health services have been abolished. In addition, the GOP has initiated production of some basic vaccines at the National Institutes of Health, to meet at least a small portion of health program needs. Health sector planning and management capabilities are very weak. In addition, adequate information is generally unavailable regarding services provided or the efficiency of the system. Furthermore, the administration of health services is itself a major constraint. Decision-making, still concentrated at the central level, needs to become much more effective.

MSH consultants attended the National Seminar on Rural Health Development in Lima during the period January 7-11, 1980. The seminar had two major objectives:

- to present the plans for the USAID supported rural health development initiative to all participants; and
- to assist each health region in developing an operating plan for submission to the MOH and USAID for funding and technical support.

MSH consultants worked with the regions to provide technical assistance in developing plans for project implementation. In addition MSH consultants visited the regions to assess their capacity to implement the plans.



### REFERENCES

Consultant's Report of National Seminar on Rural Health Development, Lima, Peru, January 7-11, 1980. Management Sciences for Health. Boston, Massachusetts.

1979 Country Development Strategy Statement - Peru. Section VI, Health Sector Review and Strategy.

Project paper. "Extension of Integrated Primary Health."

Quarterly project report. January-March, 1980.

Comments on first draft by Genny Martinez, FHO, USAID/Peru.

#### Interview:

Jim Bates, Management Sciences for Health, Boston, Massachusetts.

PERU

IDENTIFICATION

Project Name and Number:	ORDE-ICA Health Region Maternal-Child Health and Population, Number 527-0224
Location:	South-Central Peru
Project Dates:	FY 1980 - FY 1982
Funding Level and Source:	AID: \$1,800,000
Responsible Offices:	Health Officer, USAID/Peru  Bureau for Latin America and the Caribbean, Office of Development Resources, Health and Nutrition Division, AID/Washington
Principal Contractor:	Management Sciences for Health
Implementing Agencies:	Ministry of Health, ORDE-ICA Health Region, Government of Peru (GOP)

COUNTRY STATISTICS

Total Population: <u>17.6 million</u>	
Rural Population: <u>33%</u>	Infant Mortality Rate: <u>92</u>
Population Growth Rate: <u>2.8%</u>	Life Expectancy at Birth: <u>56</u>
GNP Per Capita: <u>\$740</u>	Adult Literacy Rate: <u>72%</u>

SYNOPSIS

This regional health project, currently getting underway, aims to deliver health and family planning services to the communities of south-central Peru by providing a management infrastructure to support food and medicine distribution. Village health promoters will deliver health and family planning services in villages,

backed up by a referral system. Community health committees play a major role in this project.

### BACKGROUND

The purpose of the ORDE-ICA Health Region project is to develop a model low cost delivery system for health and family planning services for Peru. This project, being implemented in the mid-southern region, will be replicated in the expanded loan and grant project designed to serve people in other provinces (project number 527-0219).

The project was funded in FY 1980 for two years. The Peruvian Ministry of Health is the principal executing agency and is contributing about 50 percent of the funding.

The project is designed to address such national health problems as the high population growth rate, the high infant mortality rate, and the lack of health manpower resources.

### PROJECT DESCRIPTION

The project began functioning in late 1979 using funds provided by the Development Support Bureau (DSB) for family planning supplies and with PL 430 funds for distribution of food to mothers and children provided through the Bureau for Latin America and the Caribbean. The project is being continued in the period FY 80-81 using health funds from AID's regular bilateral program in Peru. Special emphasis will be given to mothers and children in this model project. UNFPA funds are also supporting urban hospital based services. The GOP is contributing personnel, medicine, and equipment.

Because of the multiple origins of the project, now funded by the Bureau for Latin America and the Caribbean, no project paper exists. Most of the information was obtained from interviews and annual budget submissions.

The project outputs are as follows:

1. A series of practical field manuals for promoters
2. A logistics system design
3. A simple management information system to support the health care delivery system.
4. Management control mechanisms
5. Supervision procedure guides for all levels
6. A pharmacologic procedure manual for use of medicines by non-physicians
7. Mass media health education programs
8. Food supplements for mothers and children
9. Training and supervision of 1,600 volunteer health promoters
10. Immunizations
11. Family planning and health services

In January, 1980, the project initiated the distribution of food supplements to mothers and children in urban areas. The activity is well managed and linked to the family planning, immunization, and health education activities.

The provision of family planning services also began in January, 1980. Mass media family planning health education efforts to generate support for the program are being made via radio. Family planning contraceptive supplies are distributed at no cost in the program under AID sponsorship, but are sold inexpensively in the U.N.F.P.A.-supported portion of the program. After their training is completed in July 1980, village health promoters will be involved in distributing family planning supplies and other medications. A new training course for promoters was developed for this project to replace the previous one.

A number of field manuals have been developed for the use of promoters. These manuals will be used in the training program and will also serve as reference material in the field. The manuals are of varying length, covering subjects such as nutrition and prevention of infectious diseases.

A logistics system has been designed by the project staff and the Ministry of Health (MOH). A manual and guidelines were developed, and the MOH personnel needed to operate the system are now in place.

Management control mechanisms have been designed for the project personnel, but the training program needed to implement them has not yet taken place.

The information system to support the management mechanism remains a weak area. The system is now oriented toward the village health workers but does not link them with upper echelons of the MOH. A manual designed to help bridge this gap between community level workers and the MOH has been developed.

The manual serves to explain the supervisory activities at all levels through the collection of relevant information about service provision and utilization. A procedure guide has been prepared for all levels of supervision. A new information and supervision system is being designed for the expanded project to follow. This new guide seeks to correct the weaknesses in the present system.

The training of 1,600 village health promoters started in July, 1980. This program parallels activities taking place in the other regions. Special short term training was done in January, 1980 on the subject of supervision. The supervision of these promoters will be the responsibility of MOH personnel and community health committees. Health promoters will be responsible for providing

basic family planning, immunization and health education to the residents of the ORDE-ICA Region.

There is a strong element of community participation in the project through community health committees. This feature was developed by the regional level government officials and is supported by them. Community health committees represent the community viewpoint to the Government of Peru for health matters. Committees are responsible for supply system monitoring, drug sales, surveillance, and the program's financial accountability in the communities.

In some localities with a strong tradition of organizing around issues, the health committee has become part of the community development committee. The regional government has a primary health care development group responsible for community organizations, curriculum development, public relations, programming and supply. This group consists of physicians, nurses, a nutritionist, a public health sanitarian, and an irrigation specialist.

The following chart lists the target dates for major project outputs.

- |                                   |             |
|-----------------------------------|-------------|
| 1. Field manuals:                 |             |
| a)Nutrition                       | May, 1980   |
| b)Prevention of infection         | June, 1980  |
| 2. Logistic system design         | July, 1980  |
| 3. Management control mechanism:  |             |
| a)manuals                         | April, 1980 |
| b)training                        |             |
| 4. Management information system: |             |
| a)Hospitals                       |             |
| b)Health centers                  |             |
| c)Health post                     | March, 1980 |
| d)Community health workers        | March, 1980 |
| 5. Supervision procedure guide:   |             |
| a)Executive                       |             |
| b)Middle management               | June 1980   |
| c)Supervisor                      | July 1980   |
| d)Staff                           |             |
| e)Promoter                        |             |
| 6. Pharmacologic procedure manual | March, 1981 |

7. Food supplements distribution for mothers and children:
  - a) Urban January, 1980
  - b) Rural September, 1980
8. Training and supervision of 1,600 volunteer health promoters July, 1980
9. Immunization program
10. Family planning and health services November, 1980

#### IMPLEMENTATION EXPERIENCE

According to consultants from Management Sciences for Health Inc., it is too early to assess the project's progress. However, the strong community participation element is impressive and augurs well for project success. Changes in the health delivery system suggest that the lessons of the past projects have been learned, and attention is being given to those barriers and constraints that affected earlier efforts to provide basic health services to rural populations.

Experiences gained in providing management mechanisms, information systems, logistics, pharmaceutical supply, supervision procedures, etc., as major outputs of this project should place the expanded program on a firm footing.

The development of manuals for such topics as nutrition, preventive medicine, supervision, management, and logistics will document the course of the project as well as provide a core of knowledge for use in the expanded project.

The integration of basic primary health care services is encouraging. The delivery of family planning, immunizations, basic drugs, along with food supplements, and health education should give promoters and MOH paraprofessionals credibility with rural communities. The referral system for more serious health problems will strengthen project services.

A description of the role of village residents in the planning and decision making process was not available in Washington, but references are made to the tradition of organizing around issues in some localities of the region. The success of these community health committees in influencing project's development is worthy of continuing attention.

## REFERENCES

Annual Budget Submission.

Congressional Presentation.

Quarterly report from Peru Mission Director.

Comments on first draft by Genny Martinez, FHO, USAID/Peru.

### Interviews:

Jim Bates (by phone), Management Sciences for Health.

Anselmo Bernal, Project Officer, AID/W.

William Rhodes.

**AID - Assisted  
PRIMARY HEALTH CARE  
PROJECTS:  
Summary Reviews**

**Africa**



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**1981**



AID-ASSISTED PRIMARY HEALTH CARE PROJECTS IN

AFRICA

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BOTSWANA

IDENTIFICATION

Project Name and Number:	Health Services Development, Number 633-0078
Location:	Nationwide
Project Dates:	FY 1978 - FY 1983
Funding Level and Source:	Total Grant for Life of Project From AID: \$5.5 million  From Host Country: \$1.7 million
Responsible Offices:	Bureau for Africa, Office of Southern African Affairs, AID/Washington
Principal Contractor:	Medical Service Consultants, Inc.
Implementing Agencies:	Ministry of Health, Government of Botswana

COUNTRY STATISTICS

Total Population: <u>0.8 million</u>	
Rural Popu on: <u>88%</u>	Infant Mortality Rate: <u>97</u>
Population Growth Rate: <u>3.4%</u>	Life Expectancy at Birth: <u>56</u>
GNP Per Capita: <u>\$620</u>	Adult Literacy Rate: <u>No infor- mation</u>

SYNOPSIS

This training and development project in Botswana will increase the government's capacity to provide preventive and curative health services to the country's settled populations. A health services network is being established at the village level using family welfare educators, who are workers selected by their vil-

lages and given basic training in health promotion and prevention. Family welfare educators refer villagers to health posts from which referral proceeds to clinic health centers and lastly to hospitals. The AID-supported project proposes to upgrade the basic training of enrolled nurses and state registered nurse midwives and to train the following new categories of workers: community health nurses, family nurse practitioners, health education/nutrition assistants, and health administrators.

### BACKGROUND

Botswana is a large country with an area of 570,000 sq. miles located on the South African Plateau. The Kalahari Desert, occupying most of the land, is unsuitable for agriculture. Most of the population resides along the more fertile eastern regions of the border with Zimbabwe and South Africa. There are eight principal tribes. The major health problems in Botswana are respiratory disorders (including tuberculosis), gastroenteritis, and venereal diseases. Malaria is present but not endemic. Mental illness has increased markedly in recent years, and alcoholism is increasingly recognized as a serious health problem.

The national health objectives in order of priority are:

1. Strengthened primary health services equitably distributed.
2. Expansion of training facilities and opportunities for medical and paramedical personnel.
3. Improvement of hospitals and health centers to ensure referral services.
4. Control or reduction of environmentally-induced diseases through immunization, surveillance, and treatment.
5. Expansion and diversification of health education training.
6. Expansion of the Ministry of Health's capability to plan and manage new mental health, occupational health, and handicapped services as part of the primary health care delivery system.

Beginning with the third national health development plan, the government embarked on a long-term effort to establish preventive services along with curative medical care. The government constructed clinics and health posts in all settled communities of more than 500 persons and appointed new health personnel to work in rural areas. Hospitals were improved and training for paramedical auxiliary personnel was accelerated.

Family welfare educators' (FWEs) training is being supported by the International Planned Parenthood Federation. The educators' role is mainly motivational. One hundred family welfare educators are currently employed, and an additional sixty to ninety will be trained each year. These personnel will work under the supervision of clinic nurses and regional supervisors, including nurse practitioners and community health nurses to be trained in the AID-supported project. FWEs are paid and selected by the local district or town council. It is anticipated that their supervision will be greatly improved by introducing senior registered nurse midwives trained to function as nurse practitioners and community health nurses. The Norwegian Government has assisted the construction of homes in rural areas for nurses stationed at the clinic level. It is hoped that this will encourage them to stay in the rural areas rather than remaining at the large villages and towns as is so often the case.

A major source of health services outside the central government are the various missionary facilities. These facilities provide 25% of the inpatient beds, and they handle 20% of outpatient visits. The Association of Medical Missions of Botswana has been successful in coordinating the mission's work with the national planning process.

Traditional healers are a primary source of health care at the village level, and the MCH's policy is to integrate them into government's program. The AID Health Services Development Program is investigating ways of doing this.

AID's involvement in the health sector in Botswana began with a project carried out by Meharry Medical College in Nashville, Tennessee. This program called for support of the MCH/Family Planning Project's two major components: health education and inservice training for nurses through technical, participant, and commodity assistance. A small health education unit was established in the Ministry of Health and two participants completed bachelor's degrees in health education, while other participants completed BSc and MSc degrees in the United States. Additional participants were sent to Meharry for short courses to prepare them to assist in the inservice training courses.

Other types of assistance have been provided by the African Development Bank, the Netherlands Government, the Norwegian Government, the Harry Oppenheimer Foundation, the International Planned Parenthood Foundation, UNICEF, UNFPA, and UNDP. WHO has also provided technical assistance in a number of areas. The U.S. Peace Corps has also provided technicians in tuberculosis control, bilharzia research, and nursing education.

## PROJECT DESCRIPTION

The Health Services Development project proposes to train primarily middle-level health workers to supervise village level health workers in the national primary health care scheme. Health administrators, nutritionists, and health educators will also be trained in a continuing effort to strengthen the capability of the Ministry of Health to improve the life of the people of Botswana. The support provided by numerous other international and multinational organizations permits the resources of this project to focus on the organizational infrastructure support of primary health care.

It is expected that the major outputs of the project will be:

- A reorientation of nurse training in Botswana so that nurses may provide comprehensive services in rural and urban areas.
- Nurse specialists trained to perform as community health nurses and family practitioners in rural and urban areas.
- An improvement in the administrative capacity to support health services delivery.
- Improved preventive and promotive health services through health and nutrition education.
- A national nutrition program.

NURSING - In order to improve health services, the curriculum for the two one-year, post-basic diploma programs to train state registered nurse midwives in family and community health nursing will be developed and directed by Botswana's personnel in conjunction with project technicians.

The enrolled nurses curriculum will be revised in order to permit these nurses to play wider roles in delivering health services. A major evaluation of the present state registered nurse-midwife training program will be undertaken. Approximately nine nurses will be trained out-of-country at the master's level in nursing education and nursing administration.

HEALTH ADMINISTRATION - As part of the project, health administrators will be trained in short-term, in-country courses for senior-level positions in hospitals, on local council staffs, and in the Ministry of Health. One Botswana will be sent for health planning and management training outside of the country.

Four statistical assistants from the Health Statistics Unit will be trained in health and vital statistics.

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\*People from Botswana (singular: Botswana).

HEALTH EDUCATION/NUTRITION TRAINING - A training program for health education/nutrition assistants is being developed by the Family Health Division in cooperation with project technicians. A building for the Family Health Division is being constructed with project funds. A project technician/nutrition planner is working with the Ministry of Health's Nutrition Unit and the Interministerial Food and Nutrition Committee to develop long-term plans for nutrition at the national level. Five participants will be trained in health education and nutrition at the bachelor's and master's levels.

The contractor is responsible for coordinating AID inputs to the project and conducting most of the teaching and training programs. A large number of Botswana personnel will be sent to the United States for training, and therefore several years will be required before they fill permanent staff positions. The contractor is to arrange for the placement of candidates selected by the Government of Botswana.

Considerable support has been obtained by the Government of Botswana from various multinational and international sources. The ability to develop its health services infrastructure, including construction of hospitals and health centers through Norwegian and other bilateral agencies, has allowed the government focus to turn to developing rural primary health care services. The economic condition of the country is improving rapidly, so that the country will be able to take over the recurrent cost of this project once the personnel complete training and are posted in the field.

The project staff plans to conduct annual evaluations. An external evaluation will occur at the end of the second year of operation. Planning of project elements outlined in pre-project reports (the PP) seems quite complete, and the participation of the Government of Botswana in the decision making process seems to be active. Additionally, the government's financial commitment (\$1.7 million) covers one third of the project costs.

#### IMPLEMENTATION EXPERIENCE

Only recently have AID contract staff gone to the field and project activities begun. As of January 1980 the staff consisted of a Project Director, eight nurse educators, and a health education nutritionist. No project evaluation has been performed, though the project is considered to be on schedule.

REFERENCE

Activity Data Sheet from Congressional Presentation. July 1980.

Project Paper, Health Services Development Project. September, 1978.

Comments on first draft by USAID/Botswana.

Interview:

Patty McGrath (by phone), Medical Service Consultants, August 14, 1980.

CENTRAL AFRICAN REPUBLIC

IDENTIFICATION

Project Name and Number: Ouham Province Rural Health Project, Number 676-0002

Location: Ouham Province

Project Dates: FY 1977-1979  
(terminated September 1979)

Funding Level and Source: AID (grant): \$1.7 million  
Peace Corps: \$330,000  
Government of CAR (GOCAR): \$931,000

Responsible Offices: Health Officer, USAID/Central African Republic  
  
Bureau for Africa, Office of Central Africa Affairs, AID/Washington

Contractor: No major contractors

COUNTRY STATISTICS

Total Population: 2.2 million

Rural Population: 59% Infant Mortality Rate: 190

Population Growth Rate: 2.2% Life Expectancy at Birth: 46

GNP Per Capita: \$250 Adult Literacy Rate: No information

SYNOPSIS

As part of an effort to begin extending basic health services to rural areas, the Ouham Rural Health Project was designed to strengthen management capability in one province of what was then the Central African Empire. The project's activities also included training health personnel, developing vehicle repair capabilities, and rehabilitating and constructing health facilities. The project was abruptly terminated by Congress because of the activities of President-for-Life Bokassa. However, during its two years of oper-



ation, the project was not successful in meeting most of its goals. Problems included basic design limitations, personnel, coordination, and logistics.

### BACKGROUND

The Central African Republic, which was called the Central African Empire during most of the project implementation period, is a vast, sparsely populated plateau consisting mostly of open savannas. About 70% of the population live in rural villages of less than 1000 inhabitants, and although the government has made strong efforts to resettle these people along roads, the rural population remains dispersed. As one of the newly independent countries of Africa (1960), the Central African Republic (CAR) suffers from an embryonic infrastructure in all sectors as well as inadequate resources to pursue development without the help of considerable outside assistance. The very unsettled political climate following the recent change in governments has caused serious disruptions in all areas, thereby compounding existing problems.

The health situation in the country is typical of most developing countries, and is characterized by low life expectancy and high infant mortality and birth rates. The CAR has a particularly difficult combination of tropical diseases, including malaria, filariasis, bilharzia, and hookworm. Diseases of childhood, venereal diseases, and diseases resulting from poor sanitation are also prevalent. Health infrastructure is concentrated in the prefecture (provincial) and sous-prefecture capitals, with few government services in rural areas. The pool of trained health personnel is inadequate to meet even the needs at the central ministry level. Consequently, the health system is heavily dependent upon expatriate French physicians. France also contributes heavily to financing health and other sectors.

The GOCAR is acutely aware of the gravity of its health situation and its dependence on external resources for health development. In the past decade the country has made progress toward improving its health situation. Health was included for the first time as a separate chapter in the 1971-1975 Five Year Plan, with emphasis being given to developing "basic health services throughout the country, and training qualified health workers at all levels, specifically through preventive programs directed at rural populations." Recent measures to improve rural health include: 1) the development of a paramedical training program; 2) the establishment of the Bimbo pilot zone to study and demonstrate the delivery of health services that could be successfully extended to the entire rural population; and 3) the grouping of various Ministry of Health (MOH) vertical programs to facilitate integrated health delivery (though very recently this trend has reversed once more).

The Ouham Prefecture, located in the northwest area of the country, is the second most populated prefecture, and has the advantage of a basic road system. Ouham has a population of about 350,000, mostly small cultivators living in semi-permanent settlements which shift location every 2-10 years as the surrounding soil becomes depleted. Ouham is typical of much of the country in terms of health needs and characteristics. At present, most government health facilities are clustered in the sous-prefecture capitals. Other government services include a mobile immunization team which visits each village every two years. A 1975 APHA team assessing the health situation in the prefecture estimated that only half of the 19 health posts in villages were operating. In addition to government services, three missions sponsor hospitals and rural dispensaries which, according to the APHA team, are utilized more often than government facilities, despite the small fee they charge for services.

The antecedents of the Ouham Province Rural Health Project date back to 1974, when AID prepared a Development Assistance Program (DAP) for the country which recommended assistance for a Bimbo-like demonstration rural health delivery project. In the following year, during a follow-up visit, APHA explored the possibility of including the CAR in a health delivery system demonstration project. However, after several visits by various individuals and teams, a 1975 APHA team decided that a full-scale demonstration project should not be undertaken prior to the development of improved local management systems. The APHA team recommended instead a two phase project, the first emphasizing management, and the second supporting the expansion of services to rural areas.

According to the 1976 project paper (PP), Ouham Prefecture was selected as the project site because the GOCAR already planned to expand health services there in 1977, and because the Ministries of Social Affairs, Agriculture and Education also planned increased community development activities there. In the third Five Year Plan (1976-80), Ouham is one of four prefectures selected for extension of rural health services. However, the GOCAR Study Commission reviewing the PP document commented that they had "reservations with respect to this choice" as it was "arrived at unilaterally," and that "it is not acceptable for a government to allow its hand to be forced in this manner." Apparently, the prefecture of Basse-Kotto was slated to precede Ouham in receiving development priority, and government efforts to extend health and other services were already underway there. As a result, the GOCAR officially requested that some of the U.S. planned assistance be diverted to the Basse-Kotto prefecture. This compromise was accepted by AID, and the issue is not mentioned again in the project evaluation documents.

The Ouham project, although based on the experience of the Bimbo pilot zone, was designed to be a lower cost system, less heavily dependent on large teams and four-wheeled transport. It

was to be a health delivery model that could operate without external financial support.

### PROJECT DESCRIPTION

The Ouham Rural Health Project was designed to address the administrative, management, personnel, and communication/transportation problems impeding the development of an integrated, village level health care delivery system. Progress in the county's health status was, and still is, dependent upon the extent to which these management issues can be resolved and a low cost rural health system put into operation.

### IMPLEMENTATION EXPERIENCE

A USAID special project evaluation, conducted several months after AID support to this project was terminated, reported the following situation:

### CURRENT PROJECT STATUS

<u>OUTPUTS</u>	<u>STATUS</u>
1. A prefectural administration system for support and supervision of rural health planning and evaluation:	
a. The project was to have developed health planning and evaluation manuals.	a. None were ever developed during this project.
b. Baseline surveys and disease incidence data in addition to development of a prefecture base data collection system was to have been conducted and set up respectively.	b. An evaluation of the Bossangoa population's health problems provided baseline demographic data for the project. This was done as part of the AID short-term technical assistance to the project. The report was useful in furnishing helpful information on reference diseases by which the project could later be evaluated. However, there were no follow-up studies undertaken which could be compared with the baseline data.
c. Health plan for Ouham developed.	c. The evaluation team found no evidence of one having been established.
2. A system for the delivery of village level health education and rural sanitation:	

- a. Sixty active village health committees were envisioned in the PP.
- a. Dr. Finlay (Sept. 1979) reported that "More than 100 village health or development committees have been formed with more than 80 described as active." The evaluation team was unable to confirm or deny this statement. However, in 3 villages visited by the team (Bouanssouma, Boussera and Bangayanga), there had been no village committee meetings within the past six months since the project had been terminated. These were among the villages in which committees had been reported. Apparently committee activity was unrelated to dispensary activity in these three villages.
- b. Fifty primary schools with health education being a part of the curriculum was planned.
- b. Finlay (Sept. 1979) reported that health curriculums had been introduced and were known to be functioning in only 10 schools of Ouham and Basse-Kotto. Teachers from more than 50 schools, however, had been introduced to the adopted Togo health curriculum and were in possession of a copy of this curriculum. This curriculum was not yet officially adopted by the Ministry of Education in Bangui.
- c. A distribution system for health education materials would be established.
- c. Health education materials were obtained. An attempt was made to distribute these materials to various health workers in the villages. Although a system was being evolved for the distribution of these materials, the project was terminated before this could be effected (Finlay, 1979).

### 3. Health care services:

- a. 1,000 traditional birth attendants and healers were to have attended MCH workshops.
- a. The evaluation team saw no workshops in session, nor did it meet with known workshop participants. However, Finlay reports that at least 50 people attended these workshops (Finlay, 1979) which were conducted by a PCV in Boguila. As the evaluation team did not have the opportunity to visit Boguila, we are unable to comment further.

- b. 20 Village Health Care Agents (VHCA) identified by the community and trained in prototype training.
  - b. 5 VHCA underwent training in Boguila. (Finlay, 1979). They were chosen by the community.
4. A system for vehicle maintenance, 10 mechanics trained.
4. 1 mechanic and 2 apprentices received on-the-job training at the Bossangnic rural health services garage. The evaluation team did not see any evidence of a system for vehicle maintenance.

The Ouham Rural Health project was abruptly terminated by an action of the U.S. Congress in September of 1979, as a result of the brutal excesses of Emperor Bokassa. During its two year period of operation, however, the project encountered a series of obstacles which precluded its implementation, and which discouraged reinstatement of the project even after the overthrow of Bokassa and the institution of a new government. While there was apparently considerable activity in some project areas, none of the objectives were achieved to any substantial degree by the time the project was terminated.

When a special evaluation team reviewed the project in February of 1980 to determine which elements should be reinstated, they recommended 'discontinuing the project. According to the special evaluation, the project encountered problems arising from a change in government, personnel problems, logistics problems, as well as problems of implementing the project within the existing administrative structure and existing transportation situation in the country.

Problems arising from external factors: The unstable political situation preceding the change in government caused delays in assigning AID direct hire technicians for the project. Also, the high degree of fiscal weakness and chaos during the entire period of the project's operation posed problems, as the GOCAR was unable to fulfill its financial obligations. Rural health was clearly not important to the emperor, and it was never given much attention by his administration.

Project design problems: The 1980 special evaluation indicated that the goals of the project could never be achieved given the framework within which the project was implemented. The two major design problems (although not referred to as such by the evaluation team) were the project's dependence on scarce fuel, and the design's incompatibility with the MOH's management style and philosophy; and its dependence on scarce fuel. The French presence in the CAR is pervasive, and the country is very much dependent upon

France for support of its institutions and economic life. The country's health system is administered by the French, who do not endorse Alma Ata type primary health care programs for the CAR. The French have concentrated on two types of health activities in the rural areas: mobile vaccination teams and small hospitals in the most populated towns, an approach they consider better than using village health workers and active participation, given the sparseness of the rural population and the transportation difficulties.

Because of these differences in approach to providing health services, the evaluation team felt that a PHC project would have little likelihood of being taken over by the CAR's health system, or serve as a prototype for the delivery of basic health services in the other prefectures — one of the project's objectives. Given this situation, the 1980 evaluation recommended that "USAID not design projects with the intention of developing health systems or management capacity so long as expatriate technicians continue to administer the health system for the entire country."

Another critical design shortcoming was that the project was fuel dependent, giving it a high probability of failure. Given the chronic fuel shortages in Bangui and the country as a whole, and the widely dispersed population, important elements of the project simply could not be carried out as planned. Although it is difficult to assign responsibility for the inappropriate design and eventual failure of the Ouham Province project, members of the evaluation team have suggested that for some reason the consultants who prepared the early feasibility studies were not perceptive enough to recognize what obviously would not work in the country.

Personnel problems: Recruiting AID technicians for an isolated project site for a long-term period is generally a major problem, and one that the Ouham project was never able to resolve. Bossangoa is a particularly inhospitable place to live—hot, dry, isolated, and with no other expatriates except a few Catholic missionaries. The first technician (Physician, Chief of Party) assigned to the post resigned after 6 months. For the rest of the project period, his duties were carried out long distance by the other technician, who was based in the capital. The resulting constant shuttling from Bangui to Bossangoa, the project site, also disrupted the planned health planning activities at the central level.

Peace Corps participation in the project proved to be problematical, as the project director did not have direct authority over the activities of volunteers. There were also problems arising over the coordination of volunteers' tours of duty with project activities. These problems were compounded by the fact that there was no AID Program Officer assigned to the CAR during the project period. The responsible officer was based in Yaounde, which delayed many funding and administrative questions. This also meant there was no arbitrator of conflicts among AID technicians, between

AID technicians and PCVs, and between AID technicians and GOCAR personnel. According to the evaluation document, many of "these differences were severe enough to preclude optimum execution of duties thus affecting project outputs."

Logistics problems: Waivers for drugs procurement consumed 1 year of project time. Furthermore, the contractor for dispensary construction had unforeseen transportation problems, which significantly delayed building the planned dispensaries.

It is hoped that the lessons learned from this project will help prevent similar problems from arising in other projects.

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Comments on first draft by Dr. Richard C. Brown, member of 1980 evaluation team.

### Interview:

Dr. Thomas Georges, Special Evaluation Team Member, AID/Washington.



CENTRAL AND WEST AFRICA

IDENTIFICATION

Project Name  
and Number: Strengthening of Health Delivery  
Systems in Central and West  
Africa, Number 698-0398

Location: Headquarters, Abidjan, Ivory  
Coast

Project Dates Phase I: September 1977  
Phase II: January 1978 - April  
1980

Funding Level  
and Source: USAID: \$20 million

Responsible Offices: Bureau for Africa, Office of  
Regional Affairs, AID/Washington

Contractor: Boston University—to coordinate  
U.S. inputs

Implementing Agencies: World Health Organization,  
Brazzaville, Congo; Boston  
University

## REGIONAL STATISTICS

Total Population: 200 million

Rural Population: 85%

Infant Mortality Rate: 185

Population Growth Rate: 2.7%-3%

Life Expectancy at Birth: 50

GNP Per Capita: \$185

Adult Literacy Rate: 38%

## SYNOPSIS

The project entitled "Strengthening of Health Delivery Systems in Central and West Africa" is designed to increase the capability of the 20 countries in this region to plan and manage low cost health delivery systems. The project's approach builds upon existing Central and West African institutions. A cooperative effort funded by the Agency for International Development and the World Health Organization, this project emphasizes 1) training for health planners, managers, nurses, and village health workers; 2) regional and national disease surveillance and health information systems; and 3) research on and evaluation of affordable health care delivery systems.

## BACKGROUND

The Central and West African countries, recently freed from colonialism, suffer from a lack of health manpower, facilities, and financial resources necessary to provide health services outside of urban areas. Tropical diseases, food shortages, and a lack of transportation and communication infrastructure further cripple the ability of these nations to deliver basic health services to their citizens.

The "Project for Strengthening of Health Delivery Systems in Central and West Africa" (SHDS) was established to help meet the region's need to develop the capability and infrastructure to deliver health services on a national basis. The project's regional nature has an antecedent in the smallpox and measles eradication effort mounted by USAID in the 1960's and 1970's. That regional project involved the participation of several bilateral and multi-lateral agencies. After successfully combatting measles and smallpox, the participating agencies were interested in continuing to build the health delivery capabilities of West and Central African nations and to utilize the facilities and institutions developed as part of that earlier effort. The Center for Disease Control, for example, had established centers in several countries of the region. The World Health Organization had established training centers in Senegal, Nigeria, and Togo, and the French Government had established regional epidemic control centers in the Ivory Coast and the Cameroon.

In the early 1970's, the AID regional directors together with Bureau for Africa staff designed a project that would strengthen and broaden the capabilities developed in the WHO project, and would integrate new programs into the infrastructure remaining from the smallpox eradication programs.

Various national governments supported the primary health care strategy that was later defined in the Alma Ata Declaration of 1978. The idea of using primary health care to reach the rural populations had been accepted by the Africa region of WHO, and efforts were being made to spread these ideas throughout the continent. Tanzania, for example, addressed this issue in the 1967 Arusha Declaration.

Each of the 20 countries participating in the SHDS project has adopted a national health plan based on the primary health care strategy. Each of the countries has developed a series of national targets to be achieved during the next five years. The countries in the region are assisted in planning by the World Health Organization Country Health Programming Exercises (CHP) that have received AID support.

The American Public Health Association received a contract from the Agency for International Development in 1975 to plan and develop the first phase of the SHDS project. APHA sub-contracted with Boston University in 1976 to perform Phase I. A project director was named and a headquarters was established in Abidjan, Ivory Coast.

#### PROJECT DESCRIPTION

The project's broad goal is to improve the capability of the participating governments to plan, manage, and evaluate their health services delivery systems using a primary health care strategy. The project focuses on the development of health manpower, systems of communicable disease control, planning and management, and on research and evaluation of efforts to develop low cost delivery systems in the countries involved.

The 20 countries participating in the project are: Benin, Cameroon, the Central African Republic, Chad, Congo, Guinea Bissau, Gabon, Gambia, Ghana, Equatorial Guinea, Ivory Coast, Liberia, Mali, Mauritania, Niger, Nigeria, Senegal, Sierra Leone, Togo, and Upper Volta.

The principal project activities are the following:

1. The project's first objective is to improve national and regional health planning capabilities. Activities in this objective include:

Regional Health Planning courses for senior and

intermediate level personnel.

- Regional and in-country inter-sectoral management workshops on methods to promote health development.
- Country health programming exercises to develop national health programs.

The training center for national planning, management, and budgeting in Dakar (Senegal) has been closely involved with activities under objective one. This center was opened in 1975 under the sponsorship of the World Health Organization. It has conducted country health programming exercises in a number of countries and given orientation to country health programming in other countries. Consultations on health planning and management are given in-country. New courses have been devised for intermediate level managers, and a special seminar was presented to ministry level personnel to develop new approaches to policy analysis and management of national health programs.

2. The second objective is to increase the skills and improve the utilization of health personnel providing basic health services at the supervisory and local levels. This objective is carried out in cooperation with five African institutions.

At the WHO training centers in Lome (Togo) and Lagos (Nigeria) a program has been developed which includes the following activities: (a) The production of training materials for use in the courses given at the centers. A manual for training of village health workers used in training trainers. Materials in supervision and management are also being produced. (b) Courses for trainers, supervisors and managers in primary health care programs are given each year in French (Lome) and English (Lagos). (c) In-country assistance with planning, training of trainers, adaptation of training materials and evaluation are given by the staff at the centers to graduates of their courses who are working in primary health care programs.

Post-basic training of nurses is another program under this objective. The francophone post-basic nursing programs are located in Dakar (Senegal) and Yaonde (Cameroon) at the Centers for Nurses' Training (CESSI). The anglophone training program is associated with Cuttington College (Liberia) and has only recently enrolled its first class. For the post-basic nursing programs consultants and teachers have been provided through Boston University and from the West and Central African region to assist with the development of curricula focused on the role of nurses in primary health care. In addition, continuing education activities have been carried out for graduates of the CESSIs.

Nationals from the West and Central Africa regions are

receiving masters level training under SHDS auspices in preparation for faculty roles in the post-basic nursing training programs at the CESSIs and in Liberia.

3. Objective three is to improve regional and national disease surveillance and health information systems and to integrate them into their respective health delivery systems. The Center for Disease Control is responsible for executing this part of the project under a PASA Agreement (Participating Agencies Services Agreement) with AID. The program's activities include analyzing each nation's surveillance system in-depth, training national personnel to develop surveillance systems, constructing laboratories, distributing vaccines, and carrying out disease surveillance.

Courses have been presented on communicable disease surveillance and on developing immunization programs for the countries. Laboratories are being developed in the Cameroon and the Ivory Coast. Measles vaccine has been distributed to the countries. Training and demonstration areas for the Expanded Program for Immunizations (EPI) have been developed in the Cameroon, the Ivory Coast, and the Gambia. The EPI concentrates on immunization for measles, polio, diphtheria, pertussis, tetanus, and tuberculosis. Investigations of outbreaks have been conducted in the Cameroon for typhoid, monkey pox and Lassa fever.

4. The fourth objective is to develop affordable health delivery systems in each country. Originally the project called for a demonstration of low cost delivery systems similar to those in the DEIDS Project, a predecessor of the current project. However, this could not be completed for a variety of reasons. Instead, the training of research manpower to understand the problems and constraints in the management of health care delivery systems was substituted.

The SHDS Project and WHO/AFRO decided to collaborate on a Program for Applied Research on Primary Health Care, including training for provision of research grants for African researchers. Thus far 3 courses have been given within the region on research design and proposed development. Funds for research have also recently become available.

The project director from Boston University (the prime executor of the project) works with WHO staff members, representatives from the 20 countries, and the regional AID office in the Ivory Coast. The organizations involved formed a project review committee consisting of senior officials from the Ministry of Health as well as representatives from the implementing agencies. This committee formed a subcommittee called the Program Coordinating Committee to serve as an executive program committee to monitor project progress. The subcommittee meets with the project staff on a yearly basis, and the project review committee meets every other year.

In March and April 1980 an evaluation of the SHDS project was carried out by DIMPEX Associates, Inc., of New York City and Washington, D.C. The independent six member evaluation team composed of Americans, Africans, and a WHO representative visited the eight countries participating in the SHDS project. They found that goals and objectives were generally being achieved: the project clearly benefitted the participating countries.

### IMPLEMENTATION EXPERIENCE

The contractor's scope of work for this project is complex. Overall implementation responsibility is shared between SHDS headquarters in Abidjan (Ivory Coast) and the World Health Organization in Brazzaville (Congo). The Abidjan headquarters of SHDS is responsible for planning and managing project implementation and arranging for U.S. consultants to work on project activities. Project headquarters arranges for procurement and provides general administrative support.

The Brazzaville WHO office (AFRO) is responsible for fielding African consultants and participants in the project. WHO-AFRO assists in the selection of participants to be trained under the project and administers project funds for their support. WHO also acts as an important link between the African nations and the project headquarters, especially to the Agency for International Development. This rather complex administrative arrangement has required extraordinary diplomatic efforts by the project director, WHO personnel, and AID staff members.

It is significant to note that the project is essentially on schedule and that most activities are agreed upon by all parties. The administrative complications of the project are resolved by transoceanic communication and travel. A project evaluation report indicated that the nations participating in the project were generally satisfied with project progress, and wished to have even greater participation of their countries' health programs in the project. Participating countries felt that the project addressed real needs in their countries and gave them a significant role in decision making. The project staff has been able to win friends and elicit cooperation for the SHDS project in countries which have previously been relatively unfriendly to the United States, and have not previously sought AID assistance. The high level of cooperation among the project staff, member governments, and participating agencies that has characterized the project's preparation and operation suggests a positive prognosis for achieving project goals and objectives. Project staff often visit participating countries and communicate frequently with WHO headquarters and country representatives. Cooperation and coordination between the headquarters staff in Abidjan and AFRO has greatly facilitated the project's progress. It is significant that numerous African consultants are participating as experts in this project, providing technical

assistance to other African nations. The African consultants have been very well received. The evaluation report suggests that given this experience, perhaps more African consultants could be involved at the headquarters decision making level. The project staff in the WHO regional training centers are all Africans, assisted by expatriate advisors who play a minor role in project implementation. This staffing pattern may well be a key factor in the successful implementation of this and other health projects.

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Comments on first draft by Vivian R. Johnson, Ed. D., Campus Coordinator, SHDS, Boston University.



KENYA

IDENTIFICATION

Project Name and Number:	Kibwezi Rural Health Scheme, Number 615-0179
Location:	Makindu District at Kibwezi
Project Dates:	FY 1979 - FY 1981
Funding Level and Source:	USAID: \$815,525  Association of Swiss Civil Servants; Norwegian Church Aid; Canadian International Develop- ment Agency; Government of Kenya (GOK)
Responsible Offices:	Health Officer, USAID/Kenya  Bureau for Africa, Office of East Africa Affairs, AID/Washington
Principal Contractor:	International/African Medical Research Foundation, New York/ Nairobi, Kenya
Implementing Agency:	Ministry of Health (MOH)

## COUNTRY STATISTICS

Total Population: 15.9 million

Rural Population: 86%                      Infant Mortality Rate: 83  
Population Growth Rate: 3.9%              Life Expectancy at Birth: 53  
GNP Per Capita: \$330                      Adult Literacy Rate: 40%

## SYNOPSIS

The Kibwezi Rural Health Scheme is an important experimental primary health care project that is intended to be replicated in about 10 other underserved, remote rural areas. In the Kibwezi pilot area, a health center is to be complemented by a system of trained community health workers, supported by a mobile health unit. Construction of the facility at Kibwezi is nearly complete, though almost a year behind schedule. Forty-one community health workers (CHWs) have been selected by their communities and are in training. A baseline survey has been completed, individual villages have been identified, and the health needs to be attended by the CHWs and the health system have been prioritized.

The contractor, AMREF, has nearly completed several self-teaching manuals for CHWs as part of its highly regarded series of manuals on medical and primary health care. Additionally, the project is pioneering low cost rural electricity production.

## BACKGROUND

Kenya is a country of enormous demographic and geographic diversity. Population density ranges from severely overcrowded to sparse, and the terrain varies from arid grasslands to rainforest to mountains.

About 90% of the people live in rural areas and only about 7% in the two major cities of Nairobi and Mombasa. Medical care is provided by the Government of Kenya (GOK), Ministry of Health (MOH), and by a variety of private voluntary, usually religious, agencies. The doctor-patient ratio in Nairobi is 3,000 to 1, while in some rural areas the ratio is over 250,000 to 1. Twenty-five percent of the population lives more than twelve kilometers from the nearest health facility.

Population pressures together with the politics of land tenure are the two main factors responsible for a migration to urban areas as well as to arid regions of low productivity. Strong tribal boundaries, the large amount of land held by large foreign agribusinesses, and the GOK holdings make access to land difficult for those moving away from overcrowded areas. Land can be divided only so many times among sons and grandsons before plots become too

small to live on. Kibwezi, however, has some available land and is receiving migrants from other regions.

While Kenyan per capita income (1978) stood at \$330, for the rural population comprised mostly of small farmers (with land holdings of 1.5 hectares or less), it is about \$111. Almost one third of rural children suffer from some degree of malnutrition, and over half the rural population is under 15 years of age. Scarce water supplies, scattered populations, and poor roads further complicate the challenge of delivering basic health services.

It is the long-term plan of the Government of Kenya to provide health and other services to the very poor 1 million or so people in the arid areas of marginal productive value. The GOK is initiating projects in these areas in order to accommodate the present and future population with needed services, especially in the area of health. Kenya's 1979-83 development plan has evolved slowly from the "growth oriented" plan of 1966, through the "redistribution with growth" approach of 1974, to the "poverty alleviation strategy" of 1979 (according to AID).

The main rural health objectives of the current 5 year plan are to 1) increase health care for rural areas, 2) increase resources for preventive public health care, and 3) increase capacity and quality of staff training at all levels, particularly primary health care workers. The basic goal is to provide integrated primary health services for about 1 million impoverished people living in remote rural areas.

The Kibwezi Rural Health Scheme has evolved from the long-term commitment of the GOK to improve rural health services and from the experience of a variety of previous projects. The Kibwezi project consists of a central in- and outpatient facility that can serve up to 300 people a day, the selection and training of community health workers, the ongoing training of project staff, and a mobile health unit to provide additional preventive and curative services and health education. These services will eventually reach about 100,000 people in an area about 110 miles southwest of Nairobi on the road to Mombassa, the second largest city.

The Kibwezi Project is a model on which a series of rural health centers will be based, thus forming the backbone of Kenya's rural health services. The whole system depends on the community health worker to provide the appropriate preventive and curative health services at a minimum cost.

The contractor is the African Medical Research Foundation. (AMREF). AMREF is the only direct medical service PVO to be founded and based in a developing nation. Begun over 20 years

ago with teams of "flying doctors" serving rural areas, AMREF is a highly professional health service with projects throughout East Africa. These projects operate in close cooperation with the individual national governments' long-term health plans.

### PROJECT DESCRIPTION

AMREF has been requested by the MOH to assist in the development of an "integrated and comprehensive rural health service system for the Makindu Division of Kenya at Kibwezi."

Major activities planned for the first two years (1978-1980) include:

- Baseline surveys.
- Meetings with local village leaders on the concept of primary health care, and the role of community health workers.
- Construction of a health center to serve as the referral and supervisory base facility.
- Refresher training for staff at existing rural health facilities in the area, including briefings on the Kibwezi Rural Health Scheme and its implications for health workers in Makindu Division, especially regarding their relationship to CHWs.
- Training of 40 CHWs selected by their communities. Training is developed in close cooperation with each community to be served.
- Post-basic training, supervision, and support.
- Health care self-teaching manuals produced and distributed by AMREF for health staff, CHWs, and other health professionals and students. This is being undertaken in response to the generally limited availability of appropriate texts, manuals, and journals for health auxiliaries. Twelve manuals (4 annually) are to be prepared and distributed at no cost to training schools in Kenya and Tanzania. Further distribution for near cost through bookstores and "textbook centres" will make this part of the project ongoing and self-financing. Four planned titles include: Rural Health Service Planning and Administration, Mobile Medicine, Continuing Education Training Programs for Rural Health Workers, and Community Health Worker Manual for Kenya. Three manuals (one annually) will be translated into Swahili and 1000 distributed free to training schools. Two AMREF health journals, AFYA and DEFENDER, will also be produced and distributed.

- Detailed cost accounting records will be maintained to determine replication value of the project.
- A standard mobile health unit working with CHWs will provide the link for the promotion of health services on an area wide basis. Activities will include sanitation, health education, water supply matters, immunizations, family planning, health education for teachers, and supervision of CHWs.

Construction of the health center and staff housing is nearly completed. Several staff members have moved in, and some out-patient services have begun.

Two one-day refresher training seminars were held in 1979 for staff at existing health facilities in the Kibwezi area. The first involved 15 people, the second 39, including some "non-medical" assistant chiefs, teachers, and others. Similar seminars were held in 1980.

During the last half of 1979 and 1980, AMREF staff visited villages and met with leaders and committees to discuss the concept of primary health care and the role of the community health worker. Though the CHW is to initially be a volunteer, it is assumed that at some point the community will take responsibility for remuneration. In its proposal, AMREF indicated that obtaining community financing was not expected to be a problem in the Kibwezi area. (In the coffee growing regions, however, where there is a cash economy, the AMREF felt that people would not be willing to spend their money on a lesser trained CHW, even though close to home, since people are willing to pay significant sums to take public transportation into major health centers.) The first step is the formation of a village health committee (VHC) which has a specific set of duties that include assisting in the construction of a "village health post" (which is usually adjoining or near the home of the CHW), coordinating the selection and supervision of the CHW, promoting the program, and providing necessary logistical support.

A baseline survey of the health status in the target area has been completed, as well as several steps to determine the community "felt needs" that the CHW could help meet. While the formal CHW job description is quite detailed, each village situation is expected to vary considerably. Generally, however, CHW activities will consist of 1) preventive, rehabilitative, and health promotional activities, 2) curative activities, and 3) administrative duties such as maintaining patient and drug records.

CHWs are to receive training in such areas as 1) personal and community hygiene; 2) environmental sanitation (relevant practical skills); 3) methods of digging wells, building dams, and water catchments; 4) simple diagnosis; 5) MCH/FP methods; 6) simple

record keeping; 7) understanding the local health network, available communications, and the referral system; 8) communicable disease control; 9) nutrition education and better farming methods; 10) simple methods of individual and group communication; and 11) how to know one's limitations and educate oneself.

The training schedule is to be flexible to assure that each trainee masters the basic course content. Because of seasonal and personal interruptions, it was anticipated that the actual training might vary for each individual. An unusual aspect of the training is that it is arranged so that the trainee does not have to leave the village, and thus will not break his/her ties to the community. Training is arranged in the village itself, or within an easy commuting distance.

AMREF considers supervision of CHWs by the Kibwezi staff to be very important: it should "therefore be continuous and reliable." However, great care is to be exercised in avoiding authoritarian relationships by fostering a teaching and participation role that might even involve living periodically in a given village. The village health committee is also envisioned as playing an unspecified "supervisory back-up" role. However, the main function of the Kibwezi supervision is to check on the health problems of the area and strengthen the relationship between the CHW and the local development agencies.

As of September 1980, the training of 41 CHWs was well underway "with no dropouts." The types of trainees range from traditional healers and midwives to older male farmers who are respected members of their communities. Some are illiterate, which introduces special problems in teaching. The group varies from "late 40's to early 20's," and "about half" are women.

Remuneration was left open in hopes of finding appropriate forms of ongoing community financing. Since the underlying program philosophy is that "the community must accept responsibility for the program at the outset," the understanding was clear that while CHWs initially worked voluntarily, some form of remuneration must evolve. AMREF believed that given adequate interest, enthusiasm, and commitment on the part of the villagers, the program could work. The response has initially been good. For example, one village said that it was ready to provide land, bricks, and labor for the village health post and build a house for the CHW as well. AMREF reports that once explained, the concept of PHC has been accepted with enthusiasm.

#### IMPLEMENTATION EXPERIENCE

Given the importance of the Kibwezi project to the overall rural health plan of Kenya, all parties are paying close attention to what is happening there. What is learned there will be of great value throughout East Africa and elsewhere. It is also a very visible project for AMREF.

It is important to understand the close working relationship between AMREF and the MOH. The MOH operates most of the health facilities in the country, and is actively working to increase cooperation and planning with voluntary and church projects and hospitals in order to minimize conflicts and overlap of services. Moreover, the MOH gives AMREF about \$80,000 per year for various medical services and training workshops around the country. Also, the AMREF medical director is a former MOH official. Under this close MOH oversight, AMREF has responsibility for project implementation, including hiring subcontractors. However, even here the MOH plays an integral role, since it is AMREF's responsibility to train native Kenyans to take over the project when the MOH assumes day-to-day implementation and financial responsibilities.

With replication in mind, great care seems to be taken to make the two main components of the system as efficient and low cost as possible. These two features are the health facility itself and the selection and training of CHWs.

Great attention to detail is being taken in the health center building design. For example, in cooperation with the electrical subcontractor, Timpex International, AMREF is trying to reduce Kibwezi's electrical requirements, particularly at staff residences, where "electrical cookers" and refrigerators were eliminated because of the projected high fuel costs for the diesel generator. Also, outpatient and inpatient lighting loaders were reviewed by Timpex, and found to provide higher "lumen output" than needed.

Additionally, in September 1980 a contract was signed between USAID, NASA, and AMREF, to build a supplementary photovoltaic solar system which will transform sunlight directly into electricity for the Kibwezi project. The solar electricity will power a two way radio and some outpatient electrical needs. This is the first in a planned series of USAID financed rural solar pilot projects. A secondary goal of the AID program is to provide electric power to rural areas that could not otherwise afford it. |

This form of power generation is particularly appropriate for remote areas beyond central power grids. Such locations are often dependent on diesel generators which, because of increasingly prohibitive fuel costs, and the relative inaccessibility of maintenance services and spare parts, constitute a costly and undependable power source. A NASA consultant believes that "a system of photovoltaics can be competitive and very efficient," and that photovoltaic systems like the one planned for Kibwezi would be appropriate not only for health centers but also for rural schools and cottage industry, particularly in the tropics.

AID selected Kibwezi as a pilot project site not only because of its accessibility and visibility (as a future major training center for rural health personnel in Kenya), but also because of the enthusiasm and support of the AMREF management for evaluating

alternative energy sources to replace high cost diesel electricity.

Great attention has also been given to the community health worker component of the project, and considerable efforts were made to involve the community in a meaningful, empowering way. Nevertheless, AMREF reported in March 1980 that unforeseen construction delays\* gave them "more time to establish and develop a relationship with the local community which will benefit the project long-term." This occurrence constituted a fortuitous realization of the need for even more preliminary community organizing than had been planned.

The Kibwezi project evolved out of the experiences of a number of projects carried out during the past 5 years, and embodies AMREF's general project philosophy. The two main points are: "We should never create anything that cannot be locally self-sustaining and replicable elsewhere," and that CHWs "are only as useful and competent as their training permits them to be."

Although only limited information is available on the status of the CHW program, information at hand indicates the kind of process AMREF used to develop the CHW system. AMREF's approach can be seen from the following examples.

In its first organizing effort in Kai cluster (a cluster consists of about 2,000-4,000 people living in about 400 houses), AMREF conducted a baseline survey of organized community involvement in a typical project area. Kai was chosen largely because it was the most effectively organized cluster in the area, with a history of participation in development programs (including self-help construction of schools, roads, and wells), which AMREF considers examples of the type of community participation crucial for the success of a primary health care program.

Kai has 16 self-help groups working on a variety of projects including handicrafts, a cotton farm, and pit latrines. The self-help groups assisted in identifying Kai's main health problems, and were introduced to the concept of primary health care, which "took time and numerous meetings." The AMREF team assisted these pre-existing self-help groups not only in identifying specific health problems and diseases affecting the community, but also in tracing the causes of the problems. The self-help groups then decided on a course of action and developed specific plans to deal with each major problem. Community surveys and discussion methods were used to elicit not just "participation," but village initiated activity.

\*The construction delay was caused by the construction subcontractor stopping work midway, when he realized he was losing money. AMREF had to go to court to pressure him to complete the construction.



The communities were also involved in deciding many of the specific elements of how the program was to be structured and carried out. For example, in the case of the Kai cluster, the people felt that a village health committee would be unnecessary since the self-help groups could serve that function. Then the villagers were delegated the responsibility of selecting the CHW with guidance from AMREF, which stressed that the CHW not be selected by just a few community leaders.

The result of the self-help group's meeting was a list of criteria on which selection would be based, all of which fall in details within the broader definition of the CHW, as presented by AMREF. For example, the candidate had to be a responsible adult capable of working independently with limited supervision. Each had to be a volunteer, willing to sacrifice personal work for the community's work, and ready to offer services even at night if called upon. In some groups, mobility was one criterion, including readiness to cover great distance without complaining," and "in some cases selection was extended to nursery school teachers and adult education teachers."

AMREF reports that 3 major issues were repeatedly raised during the community meetings:

- (1) Payments for CHWs. This matter was deferred until after the final selection.
- (2) Educational requirements for CHWs. There was often a heated discussion as to whether education should be an overriding criterion, because many people were reluctant to exclude the invaluable services of illiterate traditional birth attendants. As it turned out, several of the trainees are, in fact, illiterate, which reportedly has presented special training problems.
- (3) CHWs' expectations. Before accepting selection, candidates were warned against expecting to be delivering a variety of services in a short time period, since a new project was expected to suffer from implementation delays. These issues were discussed to avoid frustration, discouragement, and subsequent antagonism towards the project.

Villagers were also asked to determine the role and importance of traditional medicine, and its utilization vis-a-vis modern medicine. Incorporating traditional medical practices into the PHC program is being considered. As part of efforts to incorporate the existing health care system, the project plans to train druggists in certain simple diagnostic procedures.

AMREF planned to follow up this community participation process with further discussions on primary health care, obtaining input from community leaders at local meetings (barazas) on methods

that might be useful in teaching CHWs, and providing training on community relations and ongoing data collection to the CHWs.

One long-term result of this process, for Kibwezi, Kenya, and much of East Africa, is a manual for training community health workers, based in large part on the Kibwezi experience. The manual is now written and is being translated from English into both the local language (Kikamba) and Swahili. Other manuals in the series will have similar distribution and long-term value to health workers.

What is perhaps most distinctive about the Kibwezi project is the strong sense of it being a project by and for the people of Kenya. Even though AMREF has many expatriates on its staff, it is clear that they are committed to East Africa, and that in the past 20 years they have developed a close working relationship with the GOK. This relationship contrasts with that of many PVOs not founded and headquartered in the area they serve. Both the GOK and AMREF were committed to training and using native personnel wherever possible in the Kibwezi project. This is wholly consistent with the "grassroots development" of a primary health care system, based on community-selected CHWs. Planners of similar projects should be aware of the motivating, empowering process that AMREF views as key to essential community participation. AMREF espouses the view that effective, appropriate, and ongoing community organizing may be the measure, if not the main determinant, of a successful preventive health program.

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Dr. Michael Gerber, Executive Director AMREF office (by phone), New York City. September, 1980.

Dr. Stan Marsik, NASA Lewis Research Center, Cleveland, Ohio. September, 1980.

**KENYA**

**IDENTIFICATION**

Project Name and Number:	Kitui Primary Health Care Project, Number 615-0185
Location:	Kitui District
Project Dates:	FY 1979 - FY 1981
Funding Level and Source:	USAID: \$413,000  Government of Kenya: \$275,000
Responsible Offices:	Health Officer, USAID/Kenya  Bureau for Africa, Office of East Africa Affairs, AID/Washington
Principal Contractor:	CODEL (Coordination in Develop- ment), provides direct medical services, trains community health workers and midwives, and conducts ongoing evaluation and data collection.
Implementing Agencies:	Catholic Diocese of Kitui

**COUNTRY STATISTICS**

Total Population: 15.9 million

Rural Population: <u>86%</u>	Infant Mortality Rate: <u>83</u>
Population Growth Rate: <u>3.9%</u>	Life Expectancy at Birth: <u>53</u>
GNP Per Capita: <u>\$330</u>	Adult Literacy Rate: <u>40%</u>

**SYNOPSIS**

The Kitui Primary Health Care Project is composed of four mobile health units that serve remote rural areas of the Kitui District of Kenya. These units are based in four health centers

coordinated through an administrative headquarters at the district hospital. The mobile health teams provide antenatal care, immunizations, and simple curative treatment. They also are involved in health education and some training of community health workers and midwives. Except during periods of heavy rains, which make some roads impassible, the mobile health units are all functioning. It appears, however, that curative services are taking precedence over preventive measures, and that community participation in planning, management, and evaluation is limited. The latter situation could inhibit a smooth transition to Government of Kenya (GOK) management at the end of the project grant.

#### BACKGROUND\*

In conjunction with GOK's goal of providing basic health services to about one million people living in rural areas, the Catholic Diocese of Kitui in cooperation with the Ministry of Health (MOH) started the Kitui Primary Health Care Project in 1977. The pilot stage was based in Mumoto Catholic Mission Hospital and was financed (\$24,719) by USAID through CODEL. The project was initiated following one and a half years of CRS-supported drought intervention, which had succeeded in establishing contact with large numbers of mothers and children through food distribution centers.

CODEL (Coordination in Development), a coalition of 38 organizations (mostly religious) in the United States, is the contractor for the current project. CODEL plans and implements development projects in those countries classified by the United Nations as "least developed" and "most seriously affected." Of the 139 projects supported by CODEL in 1978-79, 15 were located in Kenya.

Kitui District is a rural area 50 miles west of Nairobi. Project administration is based in the town of Kitui, also the site of the Kitui District Hospital. There is also a pastoral center operated by the Catholic Church, which has two-bed chalets and conference and dining facilities. The most common health problems in the region are measles, malaria, worms, pneumonia, incomplete abortions, pelvic inflammatory disease, sexually transmitted diseases, abscesses, skin and eye infections, fractures, wounds, anaemia (mostly caused by hook-worm), kwashiorkor, marasmas, prematurity, acute respiratory infections in infants, gastroenteritis, otitis media, leprosy, and tuberculosis.

#### PROJECT DESCRIPTION

The Kitui Primary Health Care Program intends to provide health care to people not presently served by existing government

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\* Please refer to the previous project summary for additional background information.

or medical mission facilities. This effort is carried out through outreach from the mission hospital and four mobile health units. Each month the units visit 16 village centers chosen in consultation with community leaders. The days chosen to visit are usually market days so it will be convenient for people to attend from outlying areas. Services provided include: immunizations, ante-natal care, and simple curative treatments. MCH clinic is free except for a "nominal charge" for curative treatments. Health education workshops on selected topics are also held during the village clinics. Additionally, training sessions are held about five days a month for rural women to provide their remote communities with "health experts." They are trained to provide health education as well as to treat fever, wounds, worms, diarrhea, vomiting, anemia, and other common problems.

The four units started up at the following times:

Mutomo: 1977 (the pre-pilot stage began in 1975)  
Kimangao: May 1979  
Muthale: November 1979  
Mutito: January 1980.

The aim of the project is to create a replicable, low-cost health delivery system. Ultimately this would mean that the mobile units and the four hospital health units would be linked with or assimilated into government plans for six rural health units. This plan is congruent with the GOK's plan to rationalize the health sector by avoiding duplication and competition among public and private providers. The extension of existing services also fits the national plan to extend services to remote rural areas. Government involvement in the project has included discussing and approving clinic sites, allowing the use of government dispensaries in some places, providing vaccines, and allowing staff members (e.g., family field educators) to give talks at clinics.

The major outputs of this project include immunization, simple curative care and referrals, health education, training of community health workers and midwives, evaluation of records, and surveys to determine the project's impact and appropriateness of project design.

Each health center is based at a Catholic mission. The greatest distance between any two centers is about 50 miles (though it is much longer by road). The team now consists of two enrolled midwives, three student nurses, and a driver. A UNICEF project evaluation (November 1980) noted the

...only problems are that Mutito does not have a registered nurse or leader and there will soon be changes in some of the enrolled midwives. However, having Mutomo Hospital as a base for one team allows replacements to be found without any interruption in services. The teams appear to have been re-

markably stable, which allows routines to be maintained...at present they are fully occupied with the various stations required in an integrated MCH clinic...

This statement appears to be in conflict with the November 1980 project review which stated that

It is difficult to recruit and retain staff. Within a year of completing nurse's training, most nurses transfer to Kenyatta National Hospital in Nairobi. The mission hospital at Mutomo was not recognized for the training of community nurses as had been anticipated. No clear reason was given for the refusal.

The project is keeping careful records of patients treated and has compiled statistics on the two most active units. These data indicated, for example, that between July and December 1979, 10,291 immunizations were administered to children and pregnant women in Mumoto and 5,144 in Kimangao. Immunizations included smallpox, BCG, DPT, oral polio, and measles for children, and tetanus toxoid for pregnant women. The project continues to face problems in obtaining vaccine supplies. In February, March, and April, DPT was in very short supply, and polio vaccine was not available from March to June. There was a countrywide shortage of both vaccines from July through September, which affected supplies available from the Kitui District Hospital.

Nonetheless, based on 1980 population figures and the number of people receiving vaccinations, the coverage for the four program areas was estimated to be:

Antenatal:	36%
BCG:	89%
First Polio	103%
First DPT	99%
Measles	59%
First TT	20%

The project review stated that the immunizations have lowered the infant mortality rate of children under five and reduced the numbers of children admitted to the hospital for measles, whooping cough, etc. More antenatal mothers at risk are being recognized and are delivering under medical supervision. This is presumably because of the good referral system that has developed from the mobile clinics to the mission hospitals and to and from government services. The project review also noted that mothers are displaying an ever growing interest in attending MCH clinics even when their children have completed the course of immunizations and are in no need of curative treatment.

Clinic sites vary greatly: from churches, to government dispensaries, to (in at least one case) "a little mud and wattle hut

built for the purpose by the people under the stimulus of an interested and progressive chief." Nonetheless, the teams appear to offer similar services, adapted somewhat to the local situation. For example, the topics of health education discussions are sometimes selected by the people attending. At one site mentioned in the UNICEF evaluation,

The clinic...started slowly as the rain had come after a prolonged dry season. The women assembled under a huge baobab tree and sitting on the lateral roots, listened to two enrolled midwives giving a talk on diarrhoea and a demonstration of making up a salt and sugar solution in a 'Treetops' bottle. A not-too-visible large picture 'code' of the problem diarrhoeal-bottle-flies-working mother was also used.

The UNICEF report noted that in most of the Kitui District, "Breast feeding is still fortunately almost universal." Also noted, however, is a need for improvement in weaning practices.

The original baseline survey which was to be updated annually has been repeated only once due to the lack of medical students to conduct it. The UNICEF report suggests that monitoring only a few essential items would be sufficient, and further suggests that the original sample was more detailed than was essential to repeat. The report also suggested that people might get tired of visits by outside survey takers. "It would be more logical for communities to be involved in self-diagnosis and for a few indicators to be used." The project review indicated that such a method will be developed.

Such an alternative would depend on the project's record-keeping system. The project is keeping excellent individual records on nutrition, immunization, etc. However, UNICEF noted that there is no easy way of extracting information on nutrition status or completed immunizations. Additionally, "Records of community work did not appear to be available — school visits, home visits, group work, activities of trained village women, births, and deaths in the community." It might now be possible to come down to a few essential items for monitoring and try to involve the community as much as possible.

Health education talks have been conducted. Although the Kimangao, Mutomo, and Muthale are doing varying amounts, no health education had been given at Mutito. Mutito does, however, have a small nutrition rehabilitation unit which UNICEF likened to a hospital, because it has a less homey atmosphere which is not conducive to "the intense learning experience which such mothers (of malnourished infants) should be subjected to—gardening, group preparation of food, visual aides in their rooms, kitchen, etc." Generally UNICEF found that

Health education done at the clinics is of the stereotyped lecture...with pictures and a few routine questions and



answers at the end. Mothers probably hear about eight 15-20 minute talks a year on different topics. The impact on behaviour would be slight. Virtually no family planning is being done.

The training of community health workers has been a small but active program since July 1979. Fourteen women received from 7 to 20 days of training in 1979. In 1980, nine women were given three day courses in midwifery, nutrition and infection at Muthrale; 810 women came to Kimangao for regular Saturday morning lessons, and in August 14, traditional birth attendants (of 21 selected by sub-chiefs) attended a course.

No men have been trained, in part because many young men leave Kitui to seek work in Nairobi or Mombassa. In the 20-40 age group there are twice as many women as men. UNICEF noted that in early 1981 there would be staff on leave and new staff coming so it was not foreseen that there would be any immediate increase in training village health workers.

There is no evidence of ongoing evaluation of the effectiveness of the training. However, one of the early program reports noted that "a simple syllabus on basic health, which was drawn up as felt needs in the training of these women, had to be abandoned as not being relevant." There was also an indication that the training program was not able to cover all the topics in the time allotted.

The family planning component of both health education and training of VHWS appears to be limited to the "natural method of family planning." The Billings ovulation method is specifically mentioned. Since the project is operated by the Catholic Diocese of Kitui, the reluctance to pursue the range of family planning methods is understandable. While referrals to government centers are made on request and some of 24 trainees in family planning are reputedly promoting the natural method of family spacing, no documentation is available on the effectiveness of this program.

#### IMPLEMENTATION EXPERIENCE

This project is important both in terms of what it is and what it is not. It is an effective mobile immunization program within an effective MCH program, with a good referral system; thus it extends badly needed services to rural areas. The staff and management are both competent and dedicated. Additionally, through staff transition, students and young midwives are gaining valuable experience.

The UNICEF evaluation stated that the project achieved extremely good immunization coverage because mothers are able to carry small babies to the mobile unit sites. However, there is poor nutritional surveillance and immunization coverage of

one-through-four year olds because when the mother is pregnant again they are too heavy to carry and too small to walk.

The most serious limitation of the project is expressed in the UNICEF report: "Community based work is at such a minimum level that the programme can hardly be called a primary health care project in the Alma-Ata sense." According to UNICEF, the project problems stem from the project design calling for the four mobile teams to visit 64 centers once a month for eight hours each. Each mother, then has about 30 minutes of staff contact, eight times (more or less) per year. The evaluators felt that a monthly clinic "makes little contribution to the treatment of common complaints in the community." It is, nonetheless, a start on which a broader program may be effectively begun.

There can be little question that this is primarily a curative program with little effective PHC-type preventive work. The characteristic weakness throughout the project is a lack of community participation. In the area of sanitation, little has been done. In health education, there has been little follow-up to determine the effectiveness of the lectures. Nutrition is treated primarily as a matter of rehabilitation rather than a preventive measure. UNICEF notes, "It is not clear...to what extent sites were chosen with a view to community participation and continued activity throughout the month when the team is not visiting."

In training VHWs, even the project director indicated that the staff only hopes that they can train some local leaders to become local "health experts." A semiannual project report stated that as of late 1979 a number of Mutomo women, after only a limited amount of training "already...are looked upon in their areas as people with medical knowledge, and their advice is sought."

Although the advent of the mobile clinic sites was somewhat contingent on "the response of the people," it appears that the process of seeking this response served basically a publicity function and as a means to assess the most appropriate sites for curative clinics. Efforts to involve people in identifying their major health problems and progress toward effective preventive measures have been negligible, except for the role of chiefs and sub-chiefs in motivating the use of clinic services. While the clinics reach many people and perform an invaluable service, the question must be raised whether the people with the greatest need cannot attend because they are unable, and in turn whether the very modest VHW training program is sufficient to reach many of these people, especially when the training emphasizes curative over preventive care.

Although the UNICEF report mentioned that Kimangao concentrated on health education in schools and parent-teacher associations, it presents no details and concludes that "it was not clear if there are any regular organized activities between education and PHC, although the missions are closely related to many schools."

Similarly, intersectoral coordination is lacking in such areas as agriculture, cooperatives, and water development, even though the Diocese and the government have programs in these areas.

Another key aspect is the cost effectiveness of the transportation. According to the UNICEF report, the vehicles have been

...very well maintained with good drivers.... The good management of the project makes this system of mobile clinics effective, but it could well be that it will become increasingly difficult to maintain with rising levels of vehicle costs. Mobile clinics are merely a stage of development toward permanent community-based care. Government health services have failed to maintain any mobile services.

The report calculated that one third of the cost per recipient goes toward travel costs. The mobile teams travel by Landrover.

The area in which the issue of community participation may be most acute is in the continuity of the program. The supervisory staff members are all expatriates, and currently there is no indication that counterpart training is taking place. UNICEF noted that "the fact that this work is likely to be taken over by the government...also means that the Mission should concentrate more on aspects which will be difficult for government to assume soon, viz. training of community health workers and stimulation of community based health workers." Also the project review noted that "the frequent change in the government's medical personnel at the administrative level makes the linkage between the project and government less effective."

The project review also explains that the GOK-USAID feasibility study team, which was planning a district-wide "medical service scheme," was aware of the mobile health project, and that "it is hoped that what is now in place will be incorporated into the government's plan." It was acknowledged, however, that there may be a gap between the end of the Kitui project and the implementation of the government's plan. If this proves to be the case, it might be necessary to extend the present program beyond October 1982.

It is useful to note the difference in the Kibwezi project (see previous project description), and the Kitui approach. Although both projects are funded in part by USAID, and they are only 100 miles apart, the experiences of AMREF and the model project at Kibwezi seem to have been unknown to CODEL and the Kitui project. The UNICEF report suggests Kitui staff be trained in community participation and recommends observing AMREF's successful work at such sites as Nangina Hospital and Kibwezi. Also, both the project review and the UNICEF evaluation state that more staffers are needed to do community work, especially since the current staff members are overextended. The District Health Inspector said that it was

possible for the government to provide some personnel for this purpose.

The cause of this apparent communication gap is unclear. However, the project review complained, "It was very disappointing that no one from the AID office was present for the evaluation... We felt sufficient notice was given to assure that someone would be available." The UNICEF report emphasizes the problems and potential of the project continuing and integration with the larger program and the need for further intersectoral coordination.

Key recommendations of the UNICEF evaluation include:

- Two additional members of each mobile team should promote CP and train VHWs. A female community nurse and a male health technician are suggested.
- Antenatal care should be geared toward high risk cases.
- Immunization and growth records should be combined in a common register.
- Health education sessions should employ pretested visual aides and more active, animated group discussion, and small seminars on community-selected topics should be promoted.
- There should be greater involvement of GOK and other sectors.

Additionally, although UNICEF has offered information on PHC through their Nairobi office, further facilitation and cooperation from the AID mission might assist Kitui's current work and facilitate the project's involving the community more fully, and moving toward the district-wide health scheme.

The Kitui project presents an interesting case study in advantages and disadvantages of mobile units. Besides the generally recognized problems of vehicle maintenance and the high cost of vehicles and petrol in Kitui, it seems that the use of mobile units (alone and not in support of local health workers living in the communities) led to an emphasis on curative care and prepackaged, relatively ineffective educational talks. Based on this project's experience, one concludes that if there is a proper and efficient role for mobile units as part of a PHC program, it is to support and supplement active community level workers and community participation.

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### Interview:

Sr. Margaret Rogers, Coordinator, Africa Division, CODEL, New York, September, 1980.

LESOTHO

IDENTIFICATION

Project Name and Number:	Rural Health Development Project, Number 632-0058
Location:	Nationwide
Project Dates:	January 1979 - December 1983
Funding Level and Source:	USAID: \$3.245 million Government of Lesotho (GOL): \$454,300
Responsible Offices:	Health Officer, USAID/Lesotho  Bureau for Africa, Office of Southern African Affairs, AID/Washington
Principal Contractor:	Health Manpower Development Staff (HMDS), School of Medicine, University of Hawaii
Implementing Agency:	Ministry of Health (MOH)

## COUNTRY STATISTICS

Total Population: 1.3 million

Rural Population: 95%

Infant Mortality Rate: 111

Population Growth Rate: 2.4%

Life Expectancy at Birth: 50

GNP Per Capita: \$280

Adult Literacy Rate: 55%

## SYNOPSIS

This two phased project will assist Lesotho's Ministry of Health and Social Welfare in providing basic health services to the rural population. Phase I provided support to the Ministry of Health to improve its efficiency in planning, health manpower development, and organization. In Phase II, nurse clinicians and village health workers are being trained to deliver health services throughout rural Lesotho.

## BACKGROUND

Fourteen years after independence, Lesotho remains one of the least developed countries in the world. Ninety-five percent of the population lives in rural areas, where farming or herding are the major occupations.

The health problems are largely preventable and associated with low income, poor housing, inadequate water and sanitary facilities, and insufficient health education. The disease pattern is dominated by parasitic and infectious diseases. Typhoid, tuberculosis, venereal diseases, measles, and influenza are also prevalent. However, malaria, bilharzia, and trypanosomiasis are not believed to occur in Lesotho.

Lesotho has adopted the social goal of "Health for All by the Year 2000," and the primary health care strategy to reach it. Emphasis has been given to rural areas since adoption of the first 5-year plan (1970-1974). The Ministry of Health has taken responsibility for implementation of the plans for the health sector.

A health sector analysis was prepared in 1975 by UCLA. Other donor agencies (WHO, UNICEF, and UNDP) participated in planning activities for the Rural Health Development project. Following consultations with USAID's regional office in Swaziland and the MEDEX program of the University of Hawaii, a project implementation document (PID) was prepared in 1975. The project paper was prepared in 1976 and approved in September 1977.

The Private Health Association of Lesotho (PHAL) which prepared a document entitled "A Program to Effectively Establish a

Cadre of Trained Nurse Assistants in Lesotho" plays an important role in the Rural Health Development project.

### PROJECT DESCRIPTION

In its first phase, this project intends to improve the Ministry of Health's capability to manage and support a national primary health care system. In the second phase, nurse clinicians and village health workers are being trained to provide preventive and curative health services in rural areas. Activities began in February 1979 and were evaluated in February 1980. During the first phase, project technicians assisted in strengthening the Ministry of Health's Planning Unit and in training its personnel (statisticians and health planners). Outside the auspices of this project, one person from the Planning Unit went to the United Kingdom for advanced training in health administration. As a result of these activities, the structure of rural health administration was reorganized. Seventeen health service areas were designated, and personnel were assigned to these areas.

Other Ministry of Health accomplishments with assistance from project technicians include 1) drafting and promoting a national primary health care program; 2) writing a chapter for the third national socioeconomic plan; 3) promoting collaboration with external assistance, including the Expanded Program on Immunization, a rural water and sanitation project, and a nutrition surveillance project; and 4) promoting the improvement and renovation of rural clinics.

In order to strengthen the capability of the health planning unit, a reorganization of the data gathering system was undertaken. New forms for village clinics, health centers, and dispensaries and a system for collecting and reporting data on diseases and utilization were developed. The statistics subunit was added to the new Planning Unit. This unit is responsible for assembling, analyzing, and interpreting planning data collected at all levels of the primary health care network. The data system was tested in 1978, and the information gained was used to design training programs for health administrators and health care providers. The data are also being tabulated and published as annual statistical reports.

A logistics system to support the expansion of primary health care in rural areas was also designed during Phase I. This included a mechanism for providing drugs, medical supplies, and equipment to rural clinics and dispensaries. The problem of distributing these was compounded by the difficulty of maintaining motor vehicles. The maintenance problem was exacerbated by the large variety of motor vehicles to be serviced.

Following the reorganization recommendations, much activity took place. The recommendations were summarized in a management workshop and seminar which took place in November 1979. At that



time, a project analysis was made which identified problem areas. A curriculum adaptation workshop in January 1980 established agreement on the role and curriculum for nurse clinicians and village health workers.

As a result of an external evaluation completed in February 1980, a recommendation was made to proceed into Phase II. This was agreed upon in the Spring of 1980, and the second phase began in September 1980. During the life of the project, approximately 60 nurse clinicians will be trained who, in turn, will train village health workers in villages near their respective hospitals/clinics. It is anticipated that approximately 120 nurse clinicians will ultimately be required to serve the rural areas of Lesotho. After completion of the USAID-funded project, the Ministry of Health will continue the training of the nurse clinicians, nurse assistants, and village health workers.

The nurse clinicians will staff rural health centers and will supervise the village health workers. The nurse clinicians' role includes diagnosing and treating common medical problems at the clinic level. The nurses are also to organize preventive health care for children, both in clinics and in schools; give immunizations; provide prenatal care; offer family planning services; organize and supervise clinics; arrange for communications systems and emergency transport; institute public health measures (such as human and solid waste disposal); organize water supply and other community development projects; and train village health workers. The nurse clinicians are responsible to either the district medical officer, or a supervisor nurse clinician.

The nurse clinicians will be trained by the University of Hawaii MEDEX program in a modified competency-based program. The program includes a 6 month modular instruction, a 6 month clinical rotation, followed by a 3 month field preceptorship. During the modular phase to take place in the capital, didactic materials will be presented. During the clinical phase, students will rotate through clinical medical services for 6 months. During the preceptorship, nurse clinicians will train and supervise village health workers. Teachers will be assisted by professionals from various institutions in the area.

A revised nurse practice act for Lesotho is being developed. This new health law, which will also govern the activities of nurse clinicians, has been submitted to the legislators and it is hoped that passage of this legislation will eliminate embarrassment and legal problems for the trainees beginning their new careers.

Nurse assistants are being trained to assist in hospitals and health centers. They are a category of physician extender being trained in basic nursing procedures, the provision of curative services for the 10-15 common health problems, as well as the performance of essential preventive and promotive activities. After the nurse clinicians have been posted, nurse assistants will continue

to assist them in their role as primary providers.

Village health workers will be trained by nurse clinicians at rural health posts. There is some earlier experience with training village health workers by the Ministry of Health and the Private Health Association of Lesotho. Village health workers will be selected by their villages with advice from MOH personnel, and supported by the villages. They will receive 3 months of training primarily in preventive/promotive services, but will also be trained to provide curative services for the seven most common health problems.

Specifically, the duties of village health workers are to 1) assist in developing and maintaining a safe water supply and sanitation system; 2) identify village health problems and assist the health team in controlling outbreaks of disease, assisting the village chief in collecting vital statistics in cooperation with extension workers; 3) promote good nutrition; 4) offer MCH, family planning, and child care; 5) identify and manage common clinical problems; 6) prevent and treat vomiting and diarrhea; 7) promote personal hygiene and healthful living; 8) recognize and refer tubercular and leprosy patients; and 9) provide first aid.

The University of Hawaii Medical School is the technical assistance contractor for this project to the Ministry of Health. Their team of four professionals is supplemented by short-term consultants. This team has analyzed the problems and constraints of the MOH and made recommendations which have resulted in:

- . A national primary health care plan.
- . Plans for reorganization of the Ministry.
- . Establishment of various training programs based on the MEDEX concepts.

An extensive document entitled a "Plan for Strengthening and Supporting a Primary Health Care System for the Kingdom of Lesotho" was prepared as part of the project's semi-annual report to the MOH. This document describes the project in great detail.

#### IMPLEMENTATION EXPERIENCE

The following chart describes the project status as of the fall of 1980.

CURRENT PROJECT STATUS

<u>OUTPUT</u>	<u>STATUS</u>
Phase I: 1979-1980	
1. Reorganization of the MOH.	1. Approved by cabinet.
2. Seventeen health service areas designated by 1981.	2. Ten administrators appointed to posts following training in Botswana— Institute of Development Management.
3. Upgrade the MOH's planning and administrative capabilities.	3. University of Hawaii technical assistance staff in place.
4. Nurse clinician and VHW curricula.	4. Curricula developed.
5. Support facilities for staff and equipment.	5. Three houses built. Three vehicles provided.
6. Data collection for Phase II planning.	6. Statistics subunit established data gathering system.
7. Health sector plan developed.	7. Health chapter of national five year development plan completed.

Phase II: September 1980-1983

1. 60 nurse clinicians trained.	1. Nurse medical practice act rewritten. Nurse clinician training began in September 1980 with 22 students.
2. 1000 village health workers trained.	2. To start in 1981.
3. Family planning assistance.	3. Family planning supplies provided.

A review of the project design suggests that a firm foundation has been laid for providing health services to the rural population. The development of a management and logistical infrastructure to support the primary health care program suggests that attention has been given to the needs of the Ministry of Health to carry out the program. The new planning capability should provide strategic

support for implementation of a long range rural health development project.

Nonetheless, some serious issues remain to be resolved. The project paper notes that one of the major health activities during the project period is the construction of an 800-bed modern hospital complex in the capital. "This facility could place strong demands on Lesotho's financial and personnel resources, and would likely detract from the government's objectives to expand and improve rural health services as envisaged in the Second Five-Year Plan." However, government officials and at least one member of the project design team felt the government could undertake the hospital project without seriously threatening the success of the PHC Project.

Another question is whether the manpower drain that characterizes the MOH will prevent the project from achieving its objectives in a timely manner. The retention of project counterparts in critical ministry positions has become a problem. This continued loss of trained personnel to the private sector may represent an insurmountable problem for the Government of Lesotho.

The strengthening of communications, logistics, and transportation systems should provide the kinds of infrastructural support that primary health care will need in the future. Attention to this essential element during the first phase of the project may make it feasible to support the nurse clinicians and VHWS in their rural locations. It appears that a realistic approach is being taken toward regular maintenance of vehicles and equipment, to ensure that these expensive resources are fully available to support the proposed extension of health workers to the 17 health services areas.

The nurse clinicians should be well trained to assume their duties, although the long list of assigned responsibilities seems somewhat excessive in view of the population base of five to ten thousand. It seems likely that the curative aspects of their job may quickly consume all of their time, preventing them from providing adequate supervision and further training for village health workers, or investing in development of safe water supply systems, sanitary disposal systems, or health education. A critical element for the success of the project, the role of the nurse clinicians as supervisors of the village health workers, is not spelled out in the project documents but has been clarified in the curricula development process. It is fortunate that the Ministry of Health and the Private Health Association of Lesotho have had several years of experience with village health workers which may help answer the above questions.

There is some question as to whether a sufficient number of

nurse clinicians are being trained. High attrition rates of this category of worker experienced in other countries suggests that the current training output is too low.

It is expected that the previous experience of the Ministry of Health and the Private Health Association of Lesotho will permit successful implementation of the village health worker aspect of the project on a national basis. Whether village health workers will be provided with medication to distribute for common illnesses and to use for first aid is not made clear in the project paper.

It is also unclear how village health workers will be remunerated. A national policy is needed to avoid the type of conflict caused by some receiving a salary while others do not. As sizable recurring costs would accrue if the Government of Lesotho paid salaries to village health workers on a nationwide basis, some other system will doubtlessly have to be worked out.

The project paper raises a number of interesting questions about how the village health workers will be integrated into the existing village health care system. Currently the indigenous system is built around medicine men/herbalists who are licensed by the government. The potential conflict between these two systems is something the project will have to deal with, although the PP states that "it is feasible to expect that two parallel health systems can exist in the villages and that villagers can have access to both types of services."

A three-week field evaluation of Phase I accomplishments was conducted by a team of experts provided by the American Public Health Association in February 1980. This three-member team consisted of a health planner, a health administrator, and a nurse clinician educator/family nurse practitioner.

The major findings were that substantial progress had been made in reorganizing the Ministry of Health to deliver health services to all parts of the country. The MOH and the Private Health Association of Lesotho are working collaboratively on their planning efforts. Systems to support PBC workers in the field have been designed, including logistics and vehicle maintenance. The MEDEX training modules have been adapted for nurse clinicians and village health workers.

The project's impact on management support is less than hoped for, since the Government of Lesotho is unable to retain trained personnel because of general service conditions (salaries, postings, lack of inducements, etc.); but the phasing of the project has permitted the establishment of a firm capability of the GOL to support a large expansion of its health services. This attention to planning and administration should permit effective implementation of the government's health strategy.

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First draft reviewed by USAID/Lesotho Health Officer, Stephen T. Norton, and Project Team Leader, Lester Wright, M.D.

MALI

IDENTIFICATION

Project Name and Number:	Rural Health Services Development, Number 688-0208
Location:	Yelimane and Koro
Project Dates:	FY 1979 - FY 1983
Funding Level and Source:	USAID: \$3.89 million Mali: \$ .87 million
Responsible Offices:	Health Officer USAID/Mali  Bureau for Africa, Office of Sahel and Francophone West Africa, AID/Washington
Principal Contractor:	Harvard Institute for Interna- tional Development
Implementing Agency:	Ministry of Health

## COUNTRY STATISTICS

Total Population: 6.6 million

Rural Population: 80%

Infant Mortality Rate: 190

Population Growth Rate: 2.7%

Life Expectancy at Birth: 42

GNP Per Capita: \$120

Adult Literacy Rate: 10%

## SYNOPSIS

The Rural Health Services Development Project is operating two pilot projects that use volunteer village health workers to bring basic curative health services to the village level. Ministry of Health staff are being trained so that the pilot projects can serve as the foundation for a national rural health system. The project has had problems in a number of areas, particularly in management. A recent and complete assessment of the project carried out in the Spring of 1980 has not yet been released by USAID/Mali.

## BACKGROUND

Over 80 percent of the Malian population live a subsistence agricultural or seminomadic pastoral existence, with little access to basic social services. Modern health services are available to less than 10 percent of the rural population. Often, those services that are available are inadequate to meet the needs for disease prevention or even simple curative care.

The health problems of Mali—high mortality and morbidity from infectious and parasitic diseases, complicated by childhood malnutrition—are typical of those of Sahelian West Africa. The major diseases affecting the population nationally are respiratory and skin infections, gastrointestinal and childhood diseases, malaria, tetanus, schistosomiasis and leprosy. In addition there are areas with high levels of onchocerciasis, giving rise to significant economic problems because of population out-migration and increased dependency ratios due to blindness.

Most of the Government of Mali's (GRM) health facilities, personnel, and services are concentrated in urban areas. Although the GRM has a policy of extending health services to rural areas, it is constrained by limited planning and management capabilities, scarce financial resources, and inadequate physical infrastructure and personnel. This project, which emphasizes the provision and support of basic health services at the village level, is in keeping with the GRM's development objectives as stated in the 1974-1978 national plan. It also has the support of national and regional MOH and development officials.



## PROJECT DESCRIPTION

The purposes of the project are:

1. To design, implement, and evaluate a demonstration rural health system that will:
  - bring health services to the village level, emphasizing promotive and preventive activities;
  - be integrated with other community and economic development activities; and
  - function with an annual budget of U.S. \$3 per person, of which \$1 per person will be recovered through sale of drugs in villages.
2. To have the GRM adapt the demonstration project as the basis for a national rural health system, and to assist MOH preparations to implement such a system.

Administratively Mali is divided into seven regions which are divided into five to nine cercles. Each cercle is further subdivided into six to eight arrondissements which, in turn, contain 20 to 40 villages. In the two regions selected for the project, the focus is on a particular cercle. Although it was originally planned that project services would be developed in all the villages within one arrondissement, while medicines and supplies would be provided to the remaining arrondissements in the cercle, the project is currently delivering full services to as many arrondissements as possible within the cercles of Koro and Yelimane in the regions of Mopti and Kayes respectively.

The first activities, after the signing of the project agreement in June 1978, were a series of anthropological and baseline studies, and discussions with MOH personnel. Peace Corps Volunteers (PCVs) assigned to the project were in the field well before the project started and had conducted background and needs surveys in the area.

The project is providing health care at the village level through part-time volunteer village health workers (VHWs).<sup>\*</sup> Within guidelines suggested by the project staff, VHWs are chosen by their villages. The curriculum for training VHWs was developed in the field. Workshops for local health and development workers were held in Yelimane and Koro to help health workers understand the project design and build a team that could train and support VHWs. The health workers also discussed guidelines for the training curriculum which was later expanded to cover simple curative and

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<sup>\*</sup>Volunteer in the sense that VHWs are not paid by the GRM nor the project. Villages, however, are urged to support VHWs by in-kind or cash remuneration.

first aid procedures. A retraining effort to stress promotion and prevention is also planned. Training sessions for VHWS were held in villages beginning in January, 1979.

A network of village level pharmacies is being established. The MOH cannot sell drugs and therefore supplies them free of charge. MOH programs, however, are plagued by chronic drug shortages. A quasi-governmental organization, the Pharmacie Populaire, sells drugs on a retail basis and has a legal monopoly. For the project to provide drugs legally, village pharmacies are set up as cooperatives and use the price structure of the Pharmacie Populaire. The American drugs used are tax-free, and communities can buy drugs at a 15 percent discount. Money from drug sales is used to restock supplies: profits go into a MOH-AID revolving fund. In Yelimane, there is a treasurer and management committee for each pharmacy, while in Koro some have treasurers and some are managed by VHWS.

#### CURRENT PROJECT STATUS

<u>OUTPUTS</u>	<u>STATUS</u>
1. Establishment of demonstration projects.	1. 1-1/2 of three planned demonstration projects established
2. Training health workers at village, arrondissement, cercle, and regional levels.	2. Village level: 30 VHWS, 17 traditional birth attendants.
3. Five persons trained in U.S. for 1 year who will return to key MOH positions.	3. One person returned, a second to follow soon.
4. Community diagnosis reports for project zones.	4. Completed.
5. Replicable VHW course including teaching aids.	5. Completed.
6. Replicable refresher course.	6. Planned.
7. Evaluation of pilot project.	7. AID evaluation completed in Spring 1980 not yet released. Final evaluation scheduled near the project's end.

#### IMPLEMENTATION EXPERIENCE

The Harvard Institute for International Development (HIID) is the contractor for the project and maintains administrative and technical assistance personnel who work with MOH counterparts. In the Spring of 1980 USAID evaluated the project, but AID/Mali has not yet released the document. The information presented here,

therefore, is based primarily on earlier HIID evaluations, which do not provide the most complete and up-to-date picture.

Generally speaking, the project site in Yelimane has encountered numerous problems and delays, while the Koro site has been more successful. Both sites have logistical difficulties due in part to a rainy season that isolates them for three to four months a year. In Yelimane temperatures reach 120 degrees in the summer; because of severe fuel shortages, electrical power produced by generators is very limited. The original Harvard field advisor in Yelimane left after one year. A husband and wife team (doctor/public health advisor) replaced him in December of 1979, but left the project after 6 months. The current plan is for MOH personnel who have already been trained to continue project activities. Harvard will no longer maintain a permanent field team in Yelimane, but will provide short-term technical assistance as needed. There has been a permanent Harvard team in Koro; the present plan is that they will expand activities in this region rather than begin work in a third region as originally planned.

Problems have arisen in the areas of training, medicine supply, data collection, community development activities, and most significantly, project management. One major difficulty stemmed from a disagreement between the project staff and USAID/Bamako on the meaning of host country contracts and the nature of project implementation.

According to an AID source, the first HIID project director "never really understood" the project agreement spelling out the triangular relationship among HIID, AID, and the MOH. HIID, however, felt that AID contractual or procedural requirements were inhibiting its ability to conduct business efficiently with the Ministry of Health. What resulted was a series of disagreements on issues such as budget authorizations for various items and the question of whether money in the revolving fund from village drug sales was subject to U.S. purchase requirements (as stipulated in the project agreement). AID (according to AID sources, joined by MOH) expected the project staff to follow the project paper and project agreement as closely as possible, while following the stipulated process for securing approval for necessary changes. HIID, however, feeling the urgency of modifications as warranted by field conditions and observations, apparently attempted to make some of these changes unilaterally.

Since the project was designed to be replicated nationwide, it has tried to work with existing MOH structures and personnel. The feeling has always been that the MOH would have a real sense of ownership. Working completely within the system, however, has also meant inheriting the system's problems. For example, the continuous breakdown of telephone service has necessitated increased vehicle use. Setting priorities for vehicle use, repair schedules, and related issues has generated conflict. The MOH is supposed to furnish office supplies for the project; however, the project is

regarded as a good source for supplies. The project originally shared the MOH secretarial pool, but hired its own secretary in November, 1979 because of delays in getting out letters, memos, and materials to the field. Problems of this kind have resulted in higher than anticipated support costs.

HIID and the MOH also have differences concerning finances. The MOH felt that financial statements of HIID's project expenses did not contain sufficient accounting detail to meet their accounting requirements. HIID, however, felt that it had supplied the information in a format to which the MOH had agreed.

The MOH's administrative structure created additional problems for the HIID team. Thus, when the Malian project director is out of the country, most MOH decisions that relate to the project are delayed until his return. Although the project staff was responsible for implementing the project, a number of field staff decisions were questioned or overturned by the MOH. Another problem has been the loss of MOH personnel to the project after they have been trained as VHW trainers. In Koro 17 percent of the health personnel were reassigned in the first 19 months after VHW training began.

Additional management difficulties arose within the HIID team—differences in interpretation of goals and methods developed between the center and the periphery. The field personnel felt that the Bamako-based staff was unresponsive to their needs and provided insufficient policy direction. The Harvard director cited logistical problems and the need for decentralization and noted that the field was somewhat slow in developing action plans. Meetings were held to address this issue. In an effort to improve communications, radio transmitters have been placed at the national, regional, and cercle levels.

Summing up the entire management area in December 1979, one evaluator stated that the project was operating "in a complex problem-ridden organizational environment as well as a difficult task environment...[where] implementation becomes more of a political process than the straight forward technical one it is often assumed to be." Since the writing of the report on which much of this material is based, there have been a number of personnel changes and resolution of many of the managerial problems. The "political process," however, remains a major factor in implementation.

The Education Development Center, Inc., is the subcontractor working on training. It designed a process in which Malians would participate as much as possible. The curriculum was based on villagers' felt needs, and villages selected their own VHWs. The project staff trained Malians to be trainers of VHWs. As of December 1980, 76 VHWs and 17 TBAs had been trained in Koro, while in Yelimane 26 VHWs and 8 traditional birth attendants had been trained. A study of Yelimane (February, 1980) found that there was some

form of coverage for 32 percent of the villages and 60 percent of the population. Coverage in Koro is better: about 95% of the population in three arrondissements are within 5 kilometers of modern medical services. VHWS see an average of 5.5 patients/week.

The same study in Yelimane also looked at the quality of VHW health care. Nineteen VHWS were tested on basic information that was part of their training. Only 8 of the 19 achieved a satisfactory score and only three were keeping adequate records. Illiterates did not do well, suggesting that some degree of literacy, even a familiarity with numbers, is needed.

Two factors contributing to low scores were lack of supervision and compensation. The original intention was that supervisory visits would be a continuation of VHW education. However, in Yelimane few VHWS received adequate medical supervision. There has not been a systematic effort to compensate VHWS. It was hoped that the villagers would deal with the problem, but this has not happened, and there have been signs of discontent from some VHWS. The project staff see in-kind payment or profits from drug sales as possible sources of compensation, but the issue has not yet been resolved.

Another unresolved issue is the source of medicine supplies for villages once USAID funding ends. Either the MOH could continue to import tax-free American drugs and use funds from drug sales for rural health activities, or the Pharmacie Populaire could take on the responsibility, and the MOH would then look for other sources of funds. This is a particularly difficult issue since the MOH is involved in "turf" battles with the Pharmacie Populaire and other agencies. The project had planned to establish pharmacies, but not other services, throughout its area of operation. However, civil authorities had been reluctant to grant permission for implementation of this aspect of the project. Today, however, the project is developing full services throughout the cercle of Koro.

As of December 1980, there were eight pharmacies in Yelimane and 17 in Koro. Pharmacists for each of the village-level pharmacies have been trained, and systems for keeping money and drug supply records have been instituted. A study in Yelimane showed an unacceptably high error rate in record-keeping and inventory control and noted that orders for resupply were not made until the supply had run out. In Koro the drug supply system is functioning well. Funds generated from the sale of drugs are being regularly collected and placed in a joint AID/GRM account.

The collection of data for the entire project is an ongoing process in Bamako, Koro, and Yelimane. Data collection includes evaluations and program monitoring activities such as finances, consultation records, vehicle use, etc. The data that were

collected in the two areas were based on differing methodologies. Also, data are more complete in Koro than in Yelimane. Records were not as well kept in Yelimane where there was a large GRM and HIID staff turnover.

A final area of concern is community development activities. The National Center for Community Development assigned a graduate of its new training school to each project field team. Much of their time has been devoted to training and supervising VHWs. Other activities have occurred in the area of water supply, where there have been surveys on the number and condition of wells in the villages. In Koro, plans for construction of 20 wells were developed. Although two are under construction, delays in outside funding have affected the project's credibility in a number of villages that were promised wells. Also, in Koro there has been reconstruction work on a village-built dam and plans made for water quality testing. In Yelimane, a project to dig or improve 28 wells is being designed.

One of the project's original intentions was to compare the relative success of the pilot projects in the two areas based on the degree of community development that had existed in each area prior to the project's start. Koro had community development activities in the area of agricultural production, while Yelimane did not. However, it is now recognized that there were too many intervening variables—such as the high percentage of Yelimane males working in France—to make a valid comparison.

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Comments on rough draft by Dr. Richard Cash, HIID.

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### Interview:

Dr. Richard Cash, Project Coordinator, Harvard Institute for International Development, October 3, 1980.

MAURITANIA

IDENTIFICATION

Project Name and Number: Rural Medical Assistance, Number 682-0202

Location: Trarza Region (southwest Mauritania)

Project Dates: FY 1979 - FY 1983

Funding Level and Source:

AID Grant:	\$1,662,000
Peace Corps:	\$ 272,000
Government of Mauritania (GIRM):	\$ 225,000
Red Crescent:	\$ 4,000

Responsible Offices: Health Officer, USAID/Mauritania  
Africa Bureau, Office of Sahel and Francophone West Africa, AID/Washington

Principal Contractor: Dimpex Associates, Inc. (technical assistance and project coordination)

Implementing Agencies: Directorate of Health, Ministry of Health, Labor and Social Affairs; Nouakchott, Islamic Republic of Mauritania



## COUNTRY STATISTICS

Total Population: 1.5 million

Rural Population: 77%

Infant Mortality Rate: 187

Population Growth Rate: 2.8%

Life Expectancy at Birth: 42

GNP Per Capita: \$270

Adult Literacy Rate: 17%

## SYNOPSIS

This project's goal is to improve rural health and help stem Mauritania's rapid rural-urban migration through testing a model for rural health outreach by community health workers. Due to economic constraints, the project is designed to minimize recurring costs through community financing of health workers and basic medicines and supplies at the local level. Implementation is just beginning after about a six-month delay.

## BACKGROUND

The Islamic Republic of Mauritania is one of the West African nations most severely affected by the 1969-74 and 1977-78 droughts. The droughts and the war in the Western Sahara (from which Mauritania withdrew in 1978) severely drained the country's economic resources. Much of the once nomadic population has migrated to urban centers or settled in villages, partly because of scarce food supplies and the loss of animals during the drought. As a result, the proportions of nomadic and sedentary population have virtually reversed during the past ten years, though Mauritania is still predominantly rural. Most of the population is engaged in raising livestock, farming, and fishing. About half the modern sector workforce is self-employed in commerce, and about 40% of the labor force is unemployed.

About 70% of the population are Moors, divided into several castes, with several black Sudanese ethnic groups concentrated in the southern region making up the remainder. The Moors have traditionally been nomads, though many have recently settled down. The black ethnic groups are sedentary agriculturalists. Sharp caste divisions define suitable economic activities and relations among and between groups. All groups share the Islamic faith. Mauritanian women, particularly Moors, enjoy more freedom and participate to a greater degree than women in most Islamic societies. It is likely that at least half of the health workers in this project will be women.

In an effort to deal with the crises caused by the drought, the government (GIRM) is concentrating on basic improvements in agricultural production and on improved rural health care in an attempt to develop the interior and limit further rural-urban migration.

The health problems facing Mauritania are endemic throughout the Sahelian region: high morbidity and mortality from infectious and parasitic diseases, complicated by early childhood nutritional deficiencies. Many health problems stem from the nomadic lifestyle and desert climate. Water is scarce and bathing is very uncommon and believed harmful, so personal hygiene is poor. Prevailing eating patterns largely preclude vegetables. Loss of animals through drought has severely affected the diet of the meat and milk dependent Moors, and malnutrition has increased. Preventive health practices are virtually unknown, except for immunization, which has been provided widely by mobile teams.

The GIRM has recognized that the urban, hospital-based, primarily curative health care system inherited from the French is inappropriate for Mauritania, where the Ministry of Health (MOH) is trying to develop a system for extending health care to the rural areas. The challenge is to devise a low cost system that can accommodate both nomadic and settled populations, as well as diverse ethnic, cultural, and caste groups. The current AID-assisted demonstration project is a first step in the effort to extend low cost basic health care to the village and encampment level (temporary nomadic settlements).

#### PROJECT DESCRIPTION

The project aims to help stabilize the rural population in the interior of Mauritania and to improve basic health services for the rural poor:

- by designing, implementing, and evaluating a demonstration rural health system that will bring promotive and preventive as well as curative services to the village level, be integrated into the existing GIRM health structure, and minimize recurring costs to the GIRM; and
- by providing a data base to enable the GIRM to decide whether or not to replicate the project.

The major project outputs are the following:

- Initiation of a preventive health care system at the village/encampment level.
- Improvement of the existing system at the dispensary level and at the regional hospital at Rosso.
- Development of locally based and supported community health workers (CHWs).
- Establishment of a resupply system that will capitalize on local community and entrepreneurial resources.

The demonstration project is being carried out in the Trarza region in southwest Mauritania because of its ethnic diversity, relative accessibility, and existing network of dispensaries and units (maternal/child health centers) to provide the necessary teaching and supervisory staff. Implementation is just beginning.

AID funds will support technical assistance, training of trainers, and initial medical supplies and equipment. Technical assistance and project coordination will be carried out by two long-term contract advisors in public health and training, supplemented by short-term consultants, who will work with the counterpart project director in the MOH.

Two Mauritanian public health nurses will train and supervise ten MOH nurses from the regional dispensaries and PMIs, who will in turn train and supervise 192 community health workers (CHWs) in three-month courses at four training centers. The CHWs will then serve their own communities. In addition to the initial three months of training, CHWs will receive one or two weeks of refresher training every year to review capacities and introduce new skills. Eight U.S. Peace Corps Volunteers (PCVs), in two slightly overlapping groups of four each, will lend support to the trainers under the supervision of the two public health nurses. A series of three workshops will be held in the next few months with the trainers, PCVs, and advisors to plan the curriculum for CHW training.

Community participation is a key element. In order for the project to succeed, community support will be essential in forming community health committees (CHCs), which will then select CHWs for training; paying CHWs; generating funds to resupply CHWs with medicines; evaluating the performance of the agents supplying medicines; and increasing community self-awareness and responsibilities and capabilities for improving health. Supported by the PCVs and possibly by the Red Crescent (equivalent to the Red Cross), the ten trainers will help mobilize communities in their areas.

Red Crescent participation was originally planned to provide first aid training throughout the project area for anyone interested in order to help create health awareness among the populace and demonstrate immediate results. It was assumed that those so trained would be good candidates for CHC or CHW responsibilities. However, because of delays in signing the project agreement, training will have to be postponed until the end of the academic year (many trainers and trainees are students). Therefore, although first aid training will occur, it will no longer be a preliminary activity. A larger role for the Red Crescent in community orientation and organization is under discussion.

The degree and type of local financing envisaged in this project is unusual, due to the need to keep GIRM recurring costs to a minimum. This is essential for project continuation and replication. CHWs will be trained and supervised by GIRM personnel, but they will not be GIRM employees. They will be compensated directly by the CHCs, in a manner determined by each committee. Project funds will be used to buy each CHW an initial kit of medicines and supplies which should last two or three months. After that, resupply will be the responsibility of the CHCs through a system of licensed commercial agents. An agent at each of the four training sites will be licensed by the GIRM pharmaceutical distributor, PHARMARIM, to sell medical supplies only to CHCs or CHWs. The agent is responsible for maintaining sufficient stock and keeping records of sales. Maximum prices are set by the GIRM. Licenses are renewed annually, with input from CHCs regarding satisfaction with the agents' services as well as evaluation by the MOF.

CHCs are responsible for generating the funds to pay CHWs, and to purchase and transport medicines and supplies. Funds will be raised using whatever means are appropriate to the community. Agreement on a system is necessary before a CHW actually begins work, to assure adequate resupply. Short-term technical assistance will be provided to help CHCs develop their funding systems.

The information system being planned will utilize baseline data gathered by the training staff and PCVs during the initial community animation/organization phase, and will receive continuing input in the form of simple data collected by CHWs. All those engaged in data collection will receive appropriate training. The data collected will be used to determine health problems, evaluate project impact, indicate areas where project adaptation is needed, and assist in deciding on project replication.

The use of CB radios by CHWs has been budgeted on a pilot basis to determine their feasibility for emergency communications, referrals, and inquiries regarding availability of supplies. Based on the project's experience, health authorities are to determine whether or not to expand the use of radios.

The CHW system will become part of the existing health care system of dispensaries, PMIs, and the regional hospital. Existing staff will be oriented regarding the CHW system, and some of them will become trainers and supervisors. Since referrals are expected to increase, the project is providing equipment and vehicles to enable existing facilities to cope with an increased workload and supervisory duties. The regional hospital will also receive new equipment. There will thus be a three-tiered system: primary care by CHWs; dispensaries and PMIs to handle cases referred by CHWs and provide training and supervision; and the regional hospital to receive referrals requiring more complex care or surgery.

## IMPLEMENTATION EXPERIENCE

The following chart describes the current project status.

### CURRENT PROJECT STATUS (mid-1980)

<u>OUTPUTS</u>	<u>STATUS</u>
1. Trainer training: a. 2 public health nurses. b. 10 dispensary/FMI nurses.	a. 2 nurses trained. b. Not yet started.
2. CHW training.	2. Not yet started.
3. Medicine resupply systems established.	3. Not yet started.
4. Preventive health care system at village/encampment level	4. Not yet started.
5. Improvement of existing health facilities.	5. Vehicles & equipment ordered.

A 6-month delay in initiating project implementation was partially due to delays in signing the Project Agreement (because of the unavailability of a translator and typing problems) and in signing the technical assistance contract.

The contractor (Dimpex Associates, Inc.) has been selected. The contract should be signed by mid-October 1980, and the two advisors assigned to the project should arrive in Mauritania before the end of 1980. The contractor will be responsible for providing all long- and short-term technical assistance consultants as well as coordinating all project elements with the Mauritanian MOH project director.

Some elements of the project are already underway. The MOH has appointed a project director and has established a new Directorate of Preventive Medicine within the Ministry to oversee this and other primary health activities. The two public health nurses who will train and supervise the ten trainers of CHWs have been selected and trained at the WHO training facility in Lome, Togo. The initial group of PCVs has just finished their U.S. training and should depart for Mauritania on September 14, 1980, to undergo in-country training through November, when they will be ready to assume their posts. Necessary commodities, including vehicles, have been purchased or ordered.

The design of this project is unusual in the degree of community participation and local financing envisaged. The development and implementation of the project will be of interest, especially in light of Mauritania's complex and changing social structure and relative lack of resources. Three evaluations have been scheduled.

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### Interviews:

Elena Hughes, Desk Officer for Mauritania, Peace Corps, Washington, D.C., September 11, 1980.

Allan Reed, Capital Projects Development Officer, USAID/Mauritania, September 4 & 8, 1980.

Ayo Reed, Peace Corps Medical Officer in Mauritania, September 4, 8 & 10, 1980.

**NIGER**

**IDENTIFICATION**

Project Name and Number:	Basic Health Services Delivery, Number 683-0214
Location:	Diffa Department/nationwide
Project Dates:	FY 1978 - FY 1981
Funding Level and Source:	AID: \$1,468,000 (grant)
Responsible Offices:	Health Officer, USAID/Niger  Bureau for Africa, Office of Sahel and Francophone West Africa Affairs, AID/Washington
Principal Contractor:	Africare
Implementing Agencies:	Ministry of Health (MOH,



## COUNTRY STATISTICS

Total Population: 5.5 million

Rural Population: 87%

Infant Mortality Rate: 200

Population Growth Rate: 2.9%

Life Expectancy at Birth: 42

GNP Per Capita: \$220

Adult Literacy Rate: 8%

## SYNOPSIS

The Basic Health Services Delivery Project was designed to train village health workers, retrain health professionals, set up sanitation programs, and establish a vehicle repair garage for Diffa Department, Niger. The U.S. organization Africare has had prime responsibility for managing the project. Due to a variety of problems, especially the lack of counterparts and direction from the MOH, the project met only some of its long-term goals. Its technical advisors, therefore, provided services rather than developing institutional capability. The project was also hampered by problems of coordination and communication between the external agencies, their Nigerian offices, and the MOH. The Basic Health Service Delivery Project is currently being merged with the National Improving Rural Health project.

## BACKGROUND

Niger was incorporated into French West Africa in 1896. In 1958 the voters approved the French constitution and voted to make the territory an autonomous republic within the French Community. The republic adopted a constitution in 1959 and in 1960 withdrew from the Community, proclaiming its independence.

As a result of a widespread drought, an estimated 2 million people were starving in Niger in 1974, but 200,000 tons of imported food (half U.S.-supplied) substantially ended famine conditions by the year's end. In addition to drought, insect infestation prevents habitation of some arable land and devastates crops. Eighty percent of the land is desert or semidesert, and the rest is also of low fertility. Because of the northern desert climate and terrain, 90% of the people live along a narrow band along the southern border immediately north of Nigeria.

Niger is relatively sparsely populated. More than 90% of Nigeriens live in rural areas away from good roads, and are small farmers and nomadic herdsmen. They are Moslems, Animists, or Christians, some of whom speak French, the official language of government. However, most Nigeriens speak Sudanese dialects. The illiteracy rate is 90%, and technical skills are scarce.

Despite the harsh conditions and social challenge of ethnic diversity, the GON is placing an emphasis on regional equity and social justice as a framework for "life enhancing" economic growth. Niger's main source of development capital, aside from external assistance, comes from recently expanded uranium resources. Almost all of this money is devoted to a national development investment fund. This Nigerien Investment Fund has grown from approximately \$15 million in 1976 to \$95 million in 1979, and is projected to grow to over \$200 million by 1984. Although Niger's uranium supply is believed to be small, the planned use of revenues, according to AID, will "be significant for at least the next generation and, coupled with continued external assistance, should help provide the extra margin required to raise overall goals several rungs above the target of a self-sustaining subsistence economy."

Since independence the Government has made an impressive effort to redirect its health effort to the rural areas people are most highly concentrated. The first step to modifying the Colonial health sector toward better meeting the country's needs was taken in 1964 when the GON prepared a Ten-Year Perspective on the Development of Health Services. This study, financed by AID with technical collaboration from WHO, assigned priority to: 1) the provision of preventive and simple curative services to the rural population; 2) health education; and 3) training of community health workers. Quite differently from most other African countries, much lower priority was placed on further development of hospital-based services in urban areas.

Thus health policy in Niger has evolved in a context of political support for programs to reach the largely rural population. As part of this strategy, the GON has given emphasis to developing the concept of the village "secouriste," or first aid person, introduced by the French colonial health system, who also served as a liaison to the mobile vaccination teams. Beginning in 1959 in Tahoua Department and developing most strongly in Maradi throughout the 1960's, the concept of the Village Health Team (VHT) gained wide acceptance. The team (Equipe de sante villageoise) was comprised of a secouriste (usually a village leader) and a matrone (traditional midwife) retrained in modern birthing practices and in rural sanitation. By the end of the 1960's securiste training had been expanded to include basic preventive and curative skills, as well as first aid. Rudiments of community participation were also established by then, through community selection and support of the VHT.

After lagging somewhat in the early 1970's, the priority assigned to development of "medecine de masse" through the VHTs was given renewed emphasis by the new government that came to power in 1974. Therefore, although the VHT, as a concept, has been in operation for over 15 years, there has been a major expansion in these teams only on the past 3-4 years. In 1979 it was estimated that about 1,500 of the 8,500 villages had VHTs.

There have been several historical problems in implementing the VHT concept: logistical problems in supervision and supply, resource constraints, lack of adequate personnel, relevant training and motivation of supervisory personnel, problems of sustaining volunteerism at the village level, and special problems in serving the nomadic population. VHT development has also been uneven in different departments. In areas with large nomadic populations, part of the problem is the cultural distance separating the nomads from established GON services, which are designed primarily for more sedentary villagers. It is not, however, GON policy to segregate health services for nomads. Instead, the GON hopes to adjust local systems to enable them to deal with nomad needs, although it is realized that this will be a slow process.

The latest Five-Year Plan (1979-1983) indicates that the GON still considers health an important sector. Financial resources allocated to health have risen from 5% to 9% of the total government budget. The plan hopes to build upon the accomplishments to date to improve the quality and quantity of health care available to all Nigeriens. Major emphasis is to be placed on: 1) further development of health facilities; 2) health education programs; and 3) reaching the most remote rural areas with village health teams. Six major problems are identified in the Plan:

- concentration of resources in urban centers, especially Niamey;
- lack of equipment in dispensaries in areas of high population density such as Mirriah, Lléla, Tahoua, and the Department of Maradi;
- reluctance of certain regions to adopt health improvement measures;
- low efficiency of the village health team in all departments;
- high medical risks encountered in specific zones of the country;
- low efficiency of mobile health care due to lack of resources.

Planning for the Basic Health Services Project was initiated in 1972 when a feasibility study grant was awarded Africare, a private voluntary organization, to study the health status of Diffa Department. The resulting Africare proposal was revised by AID to reflect AID's interest in preventive health activities and training. The GON, however, rejected the proposal as it was more interested in service delivery. Over the next four years, several proposals were prepared; those satisfactory to AID were not satisfactory to Niger. Finally, in 1977, a proposal was agreed upon.

## PROJECT DESCRIPTION

In September 1976, USAID awarded Africare a three year grant to implement the Niger Basic Health Services Delivery Project. The principal objective of the project was to strengthen the existing health care delivery services of the Ministry of Health within Diffa Department, one of the country's seven administrative units. This was to be achieved by training Nigeriens and strengthening the logistic and support system. The project had activities at both the national, ministerial, and the departmental level, in Diffa:

### National level: Niamey

1. Develop a nationwide epidemiological surveillance unit, and train nationals to staff and direct it;
2. Assist the national laboratory to develop standardized testing procedures;
3. Strengthen public health training in the school of public health and nursing schools in Niamey and Zinder.

### Departmental level: Diffa

1. Assist the development of department-wide health delivery systems through training and retraining Diffa-based state nurses, certified nurses, midwives and village health workers;
2. Strengthen the logistical infrastructure through construction of a department office building and maintenance garage, vehicle repair, and development of an equipment maintenance shop;
3. Update the skills of village health workers through training, inservice education, and supervision.

The project planned to reach these objective primarily through the provision of technical assistance. Africare provided 6 technicians, two of whom (a public health physician and an epidemiologist) were placed in Niamey to work closely with the Ministry of Health. Four advisors were placed in Diffa: a garage mechanic, a biomedical technician, a gynecologist, and a surgeon.

The epidemiologist working in Niamey was to assist in developing the national laboratory, and the public health physician to assist in strengthening the public health content of the curricula of four schools of nursing and one of public health. Additionally, the public health physician was to assist in retraining the health personnel in Diffa. In Diffa, the surgeon and gynecologist were to provide inservice training to Nigerien doctors, and the two technicians to establish vehicle repair centers and train Nigeriens to operate them.

## IMPLEMENTATION EXPERIENCE

Despite the rather straightforward objectives of the project, implementation problems which seriously impaired overall success were encountered from the outset. The project was funded in September 1976, but problems of recruiting appropriate personnel delayed activities in Diffa until 1978, about 20 months, as did an 18 month delay for AID to grant a local procurement waiver. As a result, the project was extended until March 1981, and plans were made to continue many of its activities within the Improving Rural Health Project.

A joint evaluation of the project conducted in September 1980 by Africare/AID/GON indicated that many of the project objectives had not been met. However, the evaluation notes that Africare has performed "modestly well"; that the government was very pleased with the project, and that the technicians recruited for the project were exceptionally well qualified, and provided direct services in a dedicated and professional manner. The major shortcoming was that no systematic training of Nigeriens was effected, with the exception of the certified nurses. Africare technicians ended up providing services rather than training counterpart staff or systematically training the various categories of health personnel called for in project plans.

The surgeon and gynecologist, for example, provided specialized services in the Diffa hospital, but no medical students or other personnel were assigned to them for training. The garage mechanic developed a very successful vehicle maintenance service, but was not able to develop a trained cadre of Nigeriens to take over and continue this key project component.

Other shortcomings in meeting project goals are reported by the joint evaluation team. A plan for supervisory visits to village health teams (VHTs) was not developed, and as a consequence no supervisory visits were made in 1978, and only a few were reported in 1979. Contributions to the government's ongoing training program for VHTs were also minimal, since the only Africare advisor with a public health background was stationed in Niamey, a two-day trip away. Development of the MOH's epidemiological surveillance capability also did not proceed far, because the first (epidemiologist) advisor directed his energies in other directions, including responding to outbreaks of meningitis and poisonings from contaminated flour. The replacement epidemiologists did, however, begin to make some progress in reaching stated project goals.

The public health physician, assigned to the MOH in Niamey, apparently, was able to make some contributions to the training programs for which he was responsible. Although not noted by the evaluation team, Africare quarterly reports indicate that he undertook activities such as designing the sanitation aide

curriculum, nutrition education manual for the schools and village health team manuals, and planning for Diffa seminars.

One aspect of project activities not mentioned by the evaluators is the use of "femmes relais" (referral women) in each department to refer pregnant women and children under five to MOH clinics. Africare assisted with the training of these workers. As a result of this program, prenatal clinic days had to be increased from one to three per week, and clinic attendance tripled (from 17 to 55 patients per day).

Success in meeting other project objectives can be gauged from the following output chart prepared by the 1980 joint evaluation team:

#### CURRENT PROJECT STATUS

<u>OUTPUTS</u>	<u>STATUS</u>
1. Public health programs developed to shift emphasis from curative to preventive health services. School education, MCH, health and nutrition education, and environmental sanitation programs are 100% operational in Diffa Department by end of year 3.	1. Recently teachers have been trained to provide first aid and health education to schools. MCH services were being delivered at all health centers. Africare has financed the construction of latrines at primary schools and health centers. However it had no input in the design and construction, which was faulty and reduced effective use of these latrines.
2. Trained cadre of volunteer village health personnel actively providing care. 32 VHTs trained in yr 1. 65 VHTs trained in yr 2. 96 VHTs trained in yr 3.	2. This numerical goal was surpassed. The number of securistes trained was 151. The number of matrones trained was 145. In addition to Africare's role of financing the training program, the public health doctor and the gynecologist also participated in the training programs from time to time.

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| <p>3. Development of training guides for VHTs, sanitation aides and vehicle mechanics. 4 training guides designed and in use by end of yr 1.</p> <p>4. 24 inservice education seminars for all health personnel.</p> <p>5. Plan and schedule of supervision in operation.</p>  | <p>3. Team only saw a vehicle mechanics' guide. This was written by the Africare technician and given to his own assistants and to any driver who came to the garage for assistance.</p> <p>4. In late 1979, Africare began to participate in seminars rather than finance them.</p> <p>5. No supervisory visits were made in 1978 and about 2 or 3 were made by each CM in 1979. The 1980 evaluators observed that dispensary nurses were having difficulty in maintaining a regular supervisory schedule but that the CMs were visiting the dispensaries and some villages more frequently than in 1979. Africare has receipts for supervisory visits that allegedly were made in Diffa. This information conflicts with the DDS' report. Africare, however, was not able to report the number of visits their receipts represented.</p> |
| <p>6. Design, implementation and evaluation of a national retraining program for all health programs.<br/>Design of retraining programs for:<br/>VHT<br/>Registered Nurses<br/>Practical Nurses<br/>Midwives<br/>Doctors</p> <p>Retraining program for VHTs nurses implemented by yr 2<br/>Retraining program for practical nurses implemented by yr 3</p> | <p>6.</p> <p>Done<br/>Yes - seminar level<br/>Partly - only in hospital<br/>No<br/>Partly - only at national seminar level</p> <p>Yes</p> <p>No</p>  |

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| 7. Training in diagnostic laboratory techniques.  | 7. N/A   |
| 8. Procedures for analyses, interpretation and utilization of epidemiological data by year 1.                         | 8. Yes   |
| 9. Semi-annual EPI bulletin<br>1 issue by yr 1<br>2 issues by yr 2<br>3 issues by yr 3                                | 9.<br>No<br>No<br>Yes  |
| 10. Infrastructure organized which is capable of delivery of health services to rural areas by end of first 6 months. | 10. It is team's opinion that GON already had the infrastructure approved and organized prior to project. Africare assisted in pinpointing responsibilities of persons within infrastructure.  |
| 11. Technical assistance in design, implementation, and evaluation of public health programs.                         | 11. Provided. However, apart from the public health physician posted in Niamey, these personnel were not public health specialists. Team saw no evidence of any evaluation apart from one in April 1980 done by a representative of AID's auditor. |
| 12. Technical assistance in preventive and curative health care.  | 12. 1 public health physician<br>1 gynecologist<br>1 surgeon   |
| 13. Technical assistance in production of health education materials.   | 13. The public health physician acted as an advisor to various MOH committees responsible for developing health education materials.   |
| 14. Technical assistance in designing curricula<br>seminars<br>retraining manuals<br>training manuals                 | 14.<br>No<br>Yes<br>No evidence to this effect<br>No evidence to this effect except mechanics' training manual   |
| 15. Technical assistance in design of procedures for analyses, interpretation, and utilization of EPI data.           | 15. Yes  |



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| 16. Technical assistance in vehicle maintenance and repairs.              | 16. Yes  |
| 17. Technical assistance in maintenance equipment.                        | 17. Yes  |
| 18. Short-term consultant assistance in evaluation of project activities. | 18. None   |
| 19. Short-term consultant on building construction.                       | 19. Provided by REDSO/W  |
| 20. Project management  | 20. Africare was to provide a team leader for purposes of directing efforts in line with project as designed. However, he only remained for 17 months and was based in Niamey. Also, the team feels that the poor design of the project and no job descriptions for personnel made such leadership doubtful at best. Because of these factors the project lacked clear management direction in implementation. This lack of clear leadership may have contributed to Africare going off in directions tangential to the general purposes of the project (e.g., latrine building and well digging). It is the team's opinion that actions should have been taken early in the project which would have more clearly described personnel responsibilities and program direction. Thus, the inputs may have been met, but the implementation schedule and targets were not realistic and should have been redefined earlier in the life of the project. |

## Factors Affecting Implementation

The project evaluation conducted in 1980 by Africare/AID/GON indicates that the fundamental problem was that there were basic differences in the results anticipated from the project by the government of Niger and AID. Basically, the government wanted the technical advisors to provide health services directly, while AID wanted the technical assistance to be directed to institution building and training. Africare was caught in between, without a clear focus for its effort.

According to the comments the AID/Niamey mission appended to the joint evaluation, these differences in expectations can be traced to the way the project document was altered during the four years following its initial preparation. In the original document, the technical assistance components provide for public health specialists in such areas as curricula development, health education and sanitation, rather than specialists to provide direct curative medical services. In negotiating the project agreement, Africare modified the inputs to suit the GON, but did not extensively revise project objectives. From the outset, therefore, there was a mismatch of objectives and inputs.

Other implementation problems identified in the AID evaluation include:

1. Absence of counterparts

The GON did not provide counterparts for the six Africare technicians. The critical project component of skills transfer could not be achieved.

2. Overly ambitious

By attempting to strengthen the health delivery system at both the national level and in Diffa Department, Africare undertook more than it could carry out. There was no clear determination before project initiation of the kinds of personnel deemed necessary to effect the stated purpose of the project.

3. Lack of focus

Africare seemed unsure of where to direct its efforts — to the national or departmental level. By attempting to strengthen the health system in Diffa, the project had a chance of success. However, the Africare project seemed unsure of what it wanted to do and where it was going to do it. Its only public health resources were isolated in Niamey, rather than concentrated in Diffa.

4. No evaluation component

A scheduled self-evaluation midway through the project might have focused on the difficulties of strengthening the health

delivery system at two levels simultaneously.

#### 5. Cumbersome Administrative Arrangements

Both the joint evaluation and that conducted by AID's Auditor General noted that Africare administrative decisions about the project had to be made in Washington. Neither the Africare/Diffa field staff nor project representatives in Niamey were authorized to speak for the project. The 1980 AG report noted:

"The present Africare structure required the local Africare representative to obtain instructions from Africare/Washington prior to a USAID/Niger request for information, or the Mission must work through AID/Washington to obtain an official response from Africare/Washington. Since all project accounting and administrative procedures take place in Washington, the Mission is concerned about its ability to effectively monitor Africare projects..."

Other information about program implementation comes from the AID Auditor General's evaluation conducted in 1980 as one aspect of a larger assessment of Africare's overall effectiveness in implementing AID-financed projects. Major conclusions include:

1. Africare projects, in general, are too large and ambitious to administer effectively.
2. Planning and coordination between Africare and Niger officials needed improvement; and that Niger's ability to continue health services provided by the Africare physicians was highly questionable.

#### AID Monitoring of Africare grants

According to the 1980 Auditor General's report AID officials had not met their oversight and evaluation responsibilities with regard to the Africare projects. Specific mention was made of the following problems:

- Africare quarterly reports lacked sufficient information to assess whether project objectives were being accomplished. (This was also mentioned by the other evaluation team.) And, this was about the only form of project monitoring.
- Washington officials were not making field trips to project sites.
- Missions did not submit periodic reports to AID/Washington on the projects.

#### Extention of Project

The Diffa project was extended until March 1981 to allow

several key personnel to continue their work until they join the Improving Rural Health project following its redesign in the Spring of 1981. In the new project, Africare will continue to provide technicians and be responsible for recruitment, but without having any management responsibilities.

## REFERENCES

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- Africare Fourth Quarter Progress Report July 1-September 30, 1978.
- Africare Second Quarter Progress Report January 1-March 30, 1979.
- Africare Third Quarter Progress Report April 1-June 30, 1980.
- Africare Fourth Quarter Progress Report July 1-September 30, 1980.
- Auditor General, "An Assessment of Africare's Activities." Audit Report No.: 81-6, October 14, 1980.
- Auditor General's Report on Examination of AID Programs Administered at the Regional Development Office/Niamey, #3-683-77-21. April 28, 1977.
- "Background Material for the Reconnaissance Visit to Niger." APHA. 1973.
- Boorstrom, Eugene; Gladstone Fairweather; and James Neal; "Report on Health Consulting in Niger." October - November, 1976.
- Project Evaluation Summary. Basic Health Care Delivery Services (Africare-OPG). September 1980.
- Rural Health Policy and Village Health Services in Niger: Technical Analyses and Program Recommendation for an AID Project Paper. Family Health Care Inc. November 14, 1977.

### Interviews:

Jerry Herley, General Accounting Office, October, 1980.

Michael Huffman, Project Officer, AID, November 1980.

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NIGER

IDENTIFICATION

Project Name and Number:	Rural Health Improvement Project Number 683-0208
Location:	Nationwide
Project Dates:	FY 1978 - FY 1983
Funding Level:	AID: \$14,029,000 (grant) Government of Niger: \$1.1 million contract with Africare
Responsible Offices:	Health Officer, USAID/Niger  Bureau for Africa, Office of Sahel and Francophone West Africa Affairs, AID/Washington
Principal Contractor:	Africare
Implementing Agency:	Ministry of Health (MOH)

## COUNTRY STATISTICS

Total Population: 5.5 million

Rural Population: 87%

Infant Mortality Rate: 200

Population Growth Rate: 2.9%

Life Expectancy at Birth: 42

GNP Per Capita: \$220

Adult Literacy Rate: 8%

## SYNOPSIS

The Rural Health Improvement Project is designed to expand and strengthen the government's ongoing primary health care program. Although the project supports activities in a number of areas, it focuses on developing human resources and institutional support for village level workers. Midway in this five year project, considerable progress has been made in training, but uneven progress has been made in the other areas. Government commitment to the delivery of services to the rural population is very strong, and lack of progress appears attributable mostly to the overly ambitious time-frame of the project, rather than to inherent problems in design.

## BACKGROUND

The rural health system in Niger is generally well designed and appropriate to the country's general situation, and provides a good foundation on which to gradually improve the quantity and quality of health coverage for the country. Services reach the rural areas to a much greater extent than in most other African countries. Furthermore, the system is supported by villagers as well as by key political and social groups. Important aspects of the primary health care system include the following:

- an emphasis on utilizing trained volunteers.
- an emphasis on self-reliant training and development (auto-encadrement).
- an emphasis on community self-sufficiency in primary health care.

The Rural Health Improvement Project was preceded by the Basic Health Services Delivery Project which concentrated on developing the health infrastructure in Diffa, one of the country's seven departments. Further background information about Niger, its health infrastructure, as well as a history of its health policy



are discussed in the "Background" Section of that project write-up.

### PROJECT DESCRIPTION

The project, which provides assistance to an ongoing national primary health care program, addresses problems in the rural health delivery system. These problems, as presented in the project paper, include: (1) a shortage of personnel at all levels—but especially the village level, the base of the pyramidal health delivery structure; (2) supervisory problems; (3) a lack of effective support systems for village health teams; (4) a lack of receptivity by the population to preventive health activities; and (5) dissipation of resources in the field and lack of uniformity in the program.

The Improving Rural Health Project concentrates its efforts in two general areas: (1) the development of human resources and institutional support for village health teams, in the form of drug supplies and supervision; and (2) backstop medical facilities. The project will also address itself to improving basic health needs such as potable water, environmental sanitation and nutrition. The project's emphasis is on training 1,500 village health teams—a total of 6,000 new people—and retraining about 13,500 existing village health workers. The plan, in 1978, was to bring basic health services to 3,500 villages or about 39% of the rural population.

Village health teams are generally composed of 2 matrones and 2 securistes supported by an administrative committee. The VHTs are selected by their communities and are trained and supervised by dispensary nurses. The securistes and matrones carry out minor curative care and disease prevention activities. The matrones perform traditional midwifery, enhanced by training in modern medical practices, and also promote environmental sanitation. Both refer cases beyond their capacity to dispensaries.

This project plan is to expand and strengthen other parts of the health system, particularly those support services vital to the success of the VHTs. Generally, support is to include: upgrading and expanding the number of professional health workers assigned to rural areas, increasing their mobility, increasing supervision of VHTs, improving facilities, and providing sufficient drugs and supplies.

Specifically, AID contributions will support:

### Training of Personnel:

- Academic health training for 25 teachers, senior MOH officials, and logistic/maintenance personnel, at a rate of 2 teachers, 2 MOH officials, and 1 maintenance person per year of the project.
- Participation by 1,100 persons in MOH continuing education conferences.
- Technical training for 40 certified nurses, 20 state nurses, 35 medical students, and 15 environmental health workers each year of the project.
- Training of 25 medical equipment technicians and 50 auto mechanics.

### Institutional Support:

- 200 mopeds for supervisors and 42 functioning 4-wheel drive vehicles for better supply distribution; an anticipated 45% increase in supervisory visits to health centers and dispensaries, and a 10% increase in operational efficiency of all vehicles.
- 2,700 VHTs equipped with drugs, educational materials, and other supplies.
- Sanitation improvements for 250 existing health facilities.
- New equipment or furnishings for 220 existing health facilities.
- 7 new dispensaries and 2 new department health centers already operating in Zinder and Agadez.
- Mobile health units immunizing 100,000 persons per year.
- Two garages and medical repair shops at the department health center level.
- Sanitary education programs reaching 35% of the rural population.

### IMPLEMENTATION EXPERIENCE

The mid-term evaluation of the project conducted in March, 1981, after two and a half years of operation, indicates that substantial progress is being made in improving the rural health

system. The evaluation notes that "the determination of the Nigeriennes to make their rural health system work is admirable, and their desire to do as much of it themselves as possible is commendable." The evaluation team further notes the strong commitment of the Government of Niger (GON) to set health services to underserved areas of the country, despite limited resources and harsh environmental conditions. Project progress can be gauged from the following table:

CURRENT PROJECT STATUS

OUTPUTS	STATUS
1. Training 6,000 village health workers.	1. 1,235 secouristes and 926 matrones trained.
2. Retrain 13,500 secouristes.	2. No information.
3. Senior level training (state nurses, physicians, anesthetists, etc.).	3. Support for 21 of 25 participants.
4. National seminars.	4. 2 national-level seminars supported by project (for Maradi Department in August 1979, and Zinder Department in August 1980). Both had an important impact on national health policy.
5. Department-level seminars	5. No information.
6. Equipment and Supplies	6. 4 types of equipment and supplies (drugs, audiovisual materials, lab equipment and dispensary equipment and furnishings). Many problems with supplies as no technical assistance to identify needs.  No educational materials seen.  Water filters not successful.
7. Construction of 7 dispensaries.	7. Under construction but quality very poor. Apparently the Ministry of Public Works has failed to exercise supervision over the construction.

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| <p>8. Sanitary improvement at 200 existing health centers.</p>     | <p>8. Sanitary needs of these facilities not yet inventoried. No target list for improvements prepared. Funds allocated used to construct and equip water filters.</p>  |
| <p>9. Construction of 7 latrines.</p>                              | <p>9. Abandoned 2 weeks after constructed, since they were poorly built. (AID may not have reimbursed GON for this construction.)</p>   |
| <p>10. Construction of 44 latrines.</p>                            | <p>10. Bids for construction recently received are unacceptably high.</p>   |
| <p>11. 2 garages and medical repair shops.</p>                     | <p>11. Appear to be making progress. One exceedingly well run. Both AID projects funded expatriate mechanics to train apprentices. Garage equipment not yet arrived.</p>  |
| <p>12. Sanitary education programs</p>                             | <p>12. Program depends mostly on VHTs to provide this. Increased attention to sanitation in 1981 curriculum. Appears to be little activity to preventive-educational activities by VHTs. Broadcast radio has begun to be used for health education, and there are plans to use T.V.</p> |
| <p>13. Supply 42 4-wheel drive vehicles and 200 mopeds.</p>        | <p>13. International Harvester Scouts purchased by project are inappropriate for climate and terrain—they overheat. Problems with spare parts, as Land Rovers are the standard vehicles used in-country. Mopeds appear to be good choice; although cannot reach 40% of villages.</p>    |
| <p>14. Mobile health units immunizing 100,00 persons per year.</p> | <p>14. Problems with equipment serious enough to warrant temporarily suspending program.</p>  |
| <p>15. Technical assistance.</p>                                   | <p>15. 96 person months funded - (2 mechanics and 2 sanitary engineers) 8 months used to date.</p>  |

Source: AID Mid-term Evaluation, May 1981.

Generally, the 1981 evaluation concludes that the development of human resources, including training of village health teams (VHTs) and higher level personnel, has progressed well. Less progress has been made in providing supervision, drugs, and other support to the VHTs. On the other hand, there have been numerous problems with the construction of health facilities and improvement of sanitary facilities. Thus far the GON has demonstrated little interest in improving environmental sanitation and nutrition.

#### Human Resources Development

Although delays have been encountered because of the long time required by the GON to organize its resources to manage the project, the program's training components are all progressing well. These include training senior level officials, sanitary engineers, state nurses, and certified nurses, as well as supporting national and departmental level seminars.

Training village level teams is the project's main focus. By March, 1981, when the evaluation was conducted, 1,235 securistes and 926 matrones had been trained (3,000 each are to be trained). This suggests that 26.5% of all villages are presently covered by VHTs.

- Training VHTs: The evaluation concluded that the 10-day training period for both securistes and matrones--the two members of the VHT--is too short, especially since it is frequently shortened due to weather. At present, many trainees receive only 5-8 days of training. Two short training periods of 8 days each have been suggested. The second training would be held 6-8 months after the first training, so trainees would not have to be away from home for too long a period.

Knowledge retention levels are reported to be low. This is considered a result of poor training methods. At present there is little planning to determine if course content is appropriate or to use modern educational methodologies.

- Performance: The evaluation team found that villages continue to react favorably to VHTs because they meet felt needs. Although no objective evaluation has been conducted, the VHT seems to be an effective mechanism for improving rural health. According to MOH officials at the departmental level, people in villages with VHTs are more health conscious, demand more health services, and are carrying out more healthful practices. General referral activity is also reported to be high from VHT villages. However, there is varying village participation and

commitment, which plays a large role in the utilization of VHT services.

The project evaluation concludes that VHTs are active almost exclusively in curative areas, and do little in prevention, sanitation, and hygiene. This is supported by a Family Health Care report which indicates that secouristes rarely spend time on anything other than dispensing medicines. Observations of several secouristes in Niamey Department, conducted in 1979 by Tankary (reported by Mead Over) indicate that there are shortcomings in performance. Many errors were observed in prescribing drugs, especially in the amount prescribed and the recommended frequency of use. Errors were particularly prevalent for nivaquine use. However, the study reports that secouristes had no trouble correctly recognizing symptoms and diagnosing diseases.

- Turnover: According to the evaluation report, secouristes' attrition rate is fairly high the first year—about 10%. After the third year, few leave. Matrones have a lower turnover rate. Job opportunities (VHT members are volunteers), as well as frequency of supervision and retraining, affect VHTs' stability.
- Workload: Studies of 30 secouristes (Tankary) in 1978 indicated that they saw an average of 6 patients per day. This represents about two-thirds as many patients per capita of local population as seen in dispensaries. The 1978 project paper also supports the fact that VHTs are delivering services at the village level: investigations during the project preparation revealed that the number of visits by patients to dispensaries from villages having VHTs was about half that of villages without VHTs.
- Selection: According to the studies of VHTs reviewed, the selection of VHWs is left entirely to villagers, provided that certain basic criteria are fulfilled; for example, VHWs should be volunteers, live in the village, and be prepared to undergo the necessary training. Literacy is not a criterion, as it is in many programs, which has resulted in the selection of older, less-educated community members, many of whom are traditional healers.
- Remuneration and other incentives: At present VHTs are volunteers. Some nonmonetary compensation appears to be common. A number of studies indicate that in addition to being respected, the VHT members are given help with field work. In Maradi Department, Djukanoric reports that in 1973 day-to-day subsistence (mainly food) was provided. An anthropological study in Matameye Department found that over the years, village health workers, when not originally drawn from the headman's family, have been replaced by family members. The study suggests that the

headman may consider the provision of this service sufficiently important to the maintenance of his own position to justify the considerable cost of assigning a member of his family to the position of securiste. Apparently some headman also believe that such a show of "cooperation" with the authorities may enable them to get access to additional government resources. The title of "quick doctor" also provides a certain element of prestige to dependent family members.

Although the mid-term evaluation does not mention the issue of remuneration, a recent study by Mead Over reports that there is increasing pressure from securistes for a small salary paid by the Ministry of Health. This growing dissatisfaction with unsalaried positions is attributed to the fact that villages (and VHTs) increasingly see VHT members as government workers. VHTs assume roles similar to those of traditional healers except that the teams receive support and supervision from the government. Villages originally (through a treasurer and chairman) had responsibility for village-level flow of drugs and payment, but recently, these functions have devolved to the securiste. According to this report, remuneration is an issue the project must confront in the future.

#### Institutional Support

The mid-term evaluation concludes that this project alone cannot solve the problems of improving the transportation system, supervising VHTs and other echelons of the health system, and supplying drugs to VHTs.

- Transportation: While the expatriate mechanics funded by the project have made progress in keeping vehicles on the road, the MOH has not placed sufficient importance on using these mechanics to train Nigerian mechanics. There have also been serious equipment problems. The 4-wheel drive "Scouts" provided by the project do not appear appropriate for the climate. The life of the AID-funded mopeds has been shorter than project life. Furthermore, they are useless for supervisory visits to remote villages (40-60% of villages with VHTs) which can only be reached by a gruelling 2 day horse/camel ride. Identification of proper transportation and equipment has been a problem.

Supervision: Although supervisory visits have increased, the evaluation team voiced concern that supervision cannot be expected to do much good unless it changes. At present the focus is on checking medical supplies and patient records. There is no attempt to assess skills or improve them, or to discuss the health status of the population.

- Drug Supply: According to the evaluation, the supply of medicines down to the dispensary level seems to be fairly adequate. The independent government pharmaceutical bureau operates well. However, resupply of medicines to VHTs is not adequate, and major resupply problems could develop if the VHT network expands faster than that of the supervisory staff.

The most frequent method for resupplying securistes is through supervisory visits which are supposed to occur monthly or bimonthly, but which in practice range from 1 a month to 1 per year. On random visits, staff found that few village level workers had a full complement of drugs. Thus, infrequency of supervisory visits, rather than availability of drugs appeared to be the problem.

### Construction Program

The project's plans to construct new health facilities and provide sanitary improvements to others have not met with success. Faulty construction and badly conceived water supply and sanitation systems characterize the new structures, and indicate unsatisfactory arrangements between the GON and AID for approval of designs and inspection of work in progress.

Funds allocated for sanitary improvements are not sufficient to make much impact, because of poor costing and/or inflation, and because the task of allocating the funds is being undertaken without regard to which facilities most need improvements.

### Sanitary Education Programs

Although there is an appreciation of the need to improve rural sanitation, there is no clear government policy as yet for this subsector. The main thrust of the GON toward improving environmental sanitation appears to be through the village health teams, which are project-supported.

It appears that little impact can be expected, since VHTs do not understand basic sanitary concepts. The evaluation team could not find much evidence of promotive or preventive work being carried out by securistes. The evaluation reports that "understanding of the link between adequate sanitation and prevention of disease does not appear to have penetrated to the VHT level, or from there, to rural villages." The problem is attributed to the type and format of VHT training rather than to insufficient time devoted to the subject. Fifty percent of the revised curricula for securistes is devoted to hygiene and sanitation,\* and for matrones, the figure is thirty-four percent.

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\* Subjects include: protection of water sources, measures to keep water clean, village sanitation, use of latrines, use of garbage pits, and livestock and fowl.



However, nonstructured field interviews indicated poor assimilation of the notions of basic sanitation. Review and modification of training has been proposed.

### Immunization Services

The evaluation reports significant gaps and limitations in the present scope of services in rural areas, most notably in the areas of immunization, nutrition and diarrheal control. The project as originally designed, however, supports only the mobile health immunization aspect of the MOH's program. Due to organizational and leadership problems, it is not anticipated that extending coverage to a targeted 80% of the rural population can be achieved.

Vaccination against communicable diseases is carried out by mobile teams using Ped-O-Jets to administer immunizations (there is no WHO-style Expanded Program for Immunization). The program has not had the expected impact. For example, although sufficient measles immunization has theoretically been given to protect most children, there is no objective evidence to show that incidence of the disease has been affected. The problem apparently lies in the administration of the vaccine. The evaluation estimates that because of malfunctioning Ped-O-Jets "perhaps only 10% of all vaccines recorded as administered with the POJs by the DHMM (Division of Hygiene and Mobile Medicine) are, in fact, effective doses of vaccine." The evaluation considers that spare parts and replacements purchased with project funds were not selected according to meaningful criteria, and will do little to solve present problems.

### Project Evaluation of Impact

There is no good baseline data from which to evaluate the rural health system. Although the project paper indicated that studies of life expectancy, infant mortality and worker productivity would be carried out to measure program impact in villages with VHTs, there is little chance that they will be conducted.

The plan was to have AID/Washington evaluators train third-year medical students in evaluation research. Although funds for this activity were allocated, the evaluators felt it was not a sound approach. Since the baseline studies were not carried out before starting project activities, the evaluators proposed funding a longitudinal sample survey of 20 villages with VHTs and 20 without VHTs.

### Implementation Problems

The mid-term evaluation identified a number of problems which have impeded program implementation:

- Project life: The project period is too short to achieve the type of health sector development planned (a two-year extension has been proposed).

- Administrative structure: The failure to position the project within the administrative structure of the MOH, as well as to recognize the projects supra-divisional nature has caused serious problems.
- Counterparts: The MOH has been unable to provide qualified counterparts for expatriate specialists. Reasons for this may be either the low priority given to training counterparts, or a conscious policy to use expatriate skills for direct provision of services.
- Technical assistance: Recruiting, supporting, and back-stopping personnel has been a problem. There have been long delays and problems resulting from low levels of French fluency. The evaluation also indicates that "present operating policies of Africare seem to compromise or diminish effectiveness of their people."
- Needs identification: Insufficient attention has been given to needs identification for equipment and supplies to be provided under this project.

### Evaluation Problems

Routine evaluations of project progress appear not to be accepted or understood by the government of Niger. For example, an evaluation team for the Improving Rural Health Project went to Niger in the Spring of 1980 only to be told the MOH would not cooperate with them. The Mission commented at the time: "If any lessons are to be learned from this experience, the Mission hopes that fuller understanding is gained of the divergency of priorities and perspectives held by host governments and AID on the importance of evaluation (despite signed agreements)..." The team which arrived for the joint (GON-AID) mid-term evaluation in March 1981 also faced problems. The GON would not agree to a joint evaluation, and assisted the team in their task only in the most perfunctory way. Relations between the U.S. team and their counterparts was highly structured and regulated and one-on-one discussions were discouraged.

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**SENEGAL**

**IDENTIFICATION**

Project Name and Number:	Rural Health Services Development Project, Number 685-0210
Location:	Sine Saloum Region
Project Dates:	FY 1977 - FY 1980
Funding Level and Source:	USAID: \$3.3 million Peace Corps: \$5.5 thousand Senegal: \$1.6 million
Responsible Offices:	Health Officer, USAID/Senegal  Bureau for Africa, Office of Sahel and Francophone West Africa, AID/Washington
Contractor	Only short-term personal service contractors
Implementing Agencies:	Ministry of Health, Promotion Humaine (Promotion of Human Resources)

## COUNTRY STATISTICS

Total Population: 5.7 million

Rural Population: 75%

Infant Mortality Rate: 160

Population Growth Rate: 2.6%

Life Expectancy at Birth: 42

GNP Per Capita: \$340

Adult Literacy Rate: 10%

## SYNOPSIS

After long delays, the Rural Health Services Development Project (Sine Saloum project) has been opening village health huts since August, 1979. Unfortunately, AID did not provide an experienced technical assistance team which the project needed. A recent AID evaluation team has found serious management problems at the village level and in the Senegalese bureaucracy. In June of 1980 a consulting firm hired by AID began work on redesigning the project.

## BACKGROUND

Senegal is a country of diverse climates and cultures. Climatically, the north is an arid Sahelian region while the south is a humid tropical area. The Wolof, Serrer and Peul are the major ethnic groups, and 80 percent of the Senegalese are Muslims. Since its independence from France in 1960, Senegal has chosen a political system of modified socialism. Economically, Senegal is an agrarian society that relies on peanut production for 80 percent of its export earnings.

The Senegalese have serious health problems, including malnutrition, malaria, tuberculosis, measles, and gastrointestinal diseases in children. Few rural people have access to health care services because there are not enough health posts. In its fourth and fifth four-year plans, the Government of Senegal (GOS) pledged to place one health post in every rural community. Unfortunately, the GOS did not implement more than 10-15 percent of its fourth five-year plan (1973-1977) in the area of health and accomplished almost nothing in the area of rural health. The percentage of the national budget spent on health has declined from 9.2 percent in 1969-70 to 6 percent in 1978-79. There are also great disparities in the allocation of health resources. The Cape Vert Region (including the capital, Dakar), with 19 percent of the population, received 45 percent of the health budget, while the Sine Saloum Region, with 20 percent of the population, received 9 percent.

The decline in resources for health, together with rising costs, have impeded the system's ability to deliver health services. The fifth five-year plan for example, indicates that

there has been a general decline of resources for drugs, due to increased personnel costs. As a result there have been chronic shortages of drugs, and many health facilities remain without adequate stocks for as long as nine months of the year.

There have been a number of previous efforts to improve primary health care services in Senegal. The most successful is the Pikine project located in the suburbs of Dakar. It began in 1976 with Belgian assistance and has demonstrated that a self-financed health system can work in Senegal. WHO and UNICEF have supported the GOS' health post system. UNICEF also established rural maternity centers and village pharmacies; the latter are being converted to health huts in Sine Saloum. In Gossas Department of Sine Saloum region, the Canadian Government sponsored a project in 1977 that included a vaccination program and training village health workers (VHWs). Since the Canadian technical assistance team left in mid-1979, the project has deteriorated rapidly. The Dutch Government sponsored a project in the Fatick Department of Sine Saloum which is virtually identical in its objectives to the Sine Saloum project. In contrast to the Sine Saloum project, the Fatick project started on a pilot basis in one rural community, and Dutch advisors have provided very close support. The project is working well so far.

#### PROJECT DESCRIPTION

The goal of the Sine Saloum project is to create a self-sustaining village-based health care system that can be replicated in other regions at a manageable cost. The two major purposes are (1) to create a network of village health posts supported and staffed by community health workers; and (2) to strengthen the support system of the GOS for services to secondary health posts.

The two agencies of the GOS with primary responsibility for the project's implementation are the Ministry of Health (MOH) and Promotion Humaine, a cabinet level organization concerned with rural development programs. The MOH is to provide a project director to work with three AID technical assistance staff people. The Peace Corps is to provide six volunteers to assist in project implementation. The project is being phased in, starting with two of five departments.

When the project started, the most basic level of health services was the health post. The MOH is to renovate its existing 58 posts and provide a post chief or nurse, a midwife, a sanitarian, and an orderly at each post. Also, 21 new posts (six provided by the GOS) are to be constructed and staffed. Health post personnel will receive training. Sanitarians specifically will be trained for one year at the Khorbole School which is being

renovated and expanded through AID support. The renovation and construction activities are to be completed by the Rural Engineering Service.

For each health post, 5-10 health huts will be established and staffed with 3 village health workers (VHWs): a male first aid worker to administer medicines for common ailments, a woman to handle maternal and child health, and a man to organize sanitation activities. At the hut level, the health system relies on community support. This approach coincides with GOS policy of administrative reform and decentralization in which rural community councils assume increasing responsibility for development projects in their area. In this project the rural council, working with Promotion Humaine, is to select persons to be trained as VHWs, agree on a mode of compensation for VHWs, and arrange village contributions of labor and materials for building health huts. Rural councils also help establish and oversee village management committees to be formed for each hut to receive the hut's income, check records and order medicines, and support the unit through communal labor and contributions.

A regional training and supervisory team is to prepare a curriculum that health post personnel will use to train VHWs at the health posts. A department supervisory team is to be established to help the post chief supervise medical services at the post and hut level. The post sanitarian has the responsibility for regularly supervising huts and is provided a horse and buggy for transportation. An initial stock of medicines is supplied by the project and is sold to villagers at cost. The money collected is to be used to restock drugs as necessary and to provide some income for the VHWs.

### IMPLEMENTATION EXPERIENCE

The following chart summarizes the project status as of April, 1980

#### CURRENT PROJECT STATUS\*

<u>OUTPUTS</u>	<u>STATUS</u>
1. Rural community councils will have selected 1,800 village health workers (VHW) and installed a "functioning mechanism" for their remuneration by the villagers.	1. Rural community councils have selected 1,200 VHWS; no "functioning mechanism" for their remuneration has yet been installed.
2. 600 health huts will have been constructed by the rural communities.	2. A total of 350 health huts have been constructed.

\* Source: AID interview with Project Manager, Dr. Marc Vincent, April, 1980.

3. VHWs will have received preliminary training and refresher courses.
4. A total of 21 new health posts (including 6 under supervision of the GOS) will have been constructed, staffed, and equipped.
5. All health post chiefs and VHW supervisors will have received inservice training or recycling which will enable them to instruct and monitor VHWs.
6. Supplementary equipment will have been purchased and provided to health posts and health huts.
7. Horses and carts will have been provided to health posts for transportation purposes and will be maintained by villagers.
8. Regular medicine and drug restocking, as well as maintenance of horses and buggies will have been undertaken by the rural community councils.
9. The Khombole Sanitation School will have been supplying at least 18 graduates per year.
10. Renovation of 58 health posts will have been completed.
3. All VHWs in the first two departments have been trained (though 20-30% have left their posts since training). Training is in process in the next two departments.
4. Of the 15 AID proposed posts to be constructed, 8 have been completed. Of the 6 proposed posts to be constructed by the GOS, all have been built by the local residents, but have been minimally staffed and equipped by the GOS; hence they are only partially functioning.
5. Of the total of 79 health posts chiefs, 45 have received inservice training or have been recycled. (Given the current lag in project development, no more are expected to be trained/retrained in the next two years.)
6. All supplementary equipment (syringes, forceps, bassinets, surgical knives, etc) have been delivered in health posts and huts.
7. Horses and carts have been provided only since December 1979-March 1980 to all health posts.
8. To date virtually nothing has been done (other than original installation of village health hut medicines and horses and carts).
9. The first group of graduates (20) completed training in June, 1980.
10. Of the 58 health posts, 40 have been renovated. Because of project development lag, no more are anticipated to be renovated in the next three years.



In April of 1980 USAID evaluated the Sine Saloum project and found serious problems in both project design and management. The project agreement was signed in August, 1977 and was to run for four years; however, long delays in the early implementation phases have meant that health huts are operating in only two of the five target departments. Reasons for the delay include late delivery of furniture, problems in procuring drugs, and difficulty in hiring AID advisors. The evaluators identified three elements which are vital if the project is to be successful: (1) the village health huts must be financially viable; (2) the GOS must be able to deliver needed support and supervisory services; and (3) an efficient medicine resupply system—the lifeblood of the entire project—must be organized.

A number of implementation problems at the village level were identified. The most important was the health huts' lack of financial viability. Random visits to huts revealed that they were not taking in enough money to replace the medicines used and cover other operating costs. Also, villages did not have the cash on hand that health hut books indicated they should. There are a variety of possible reasons for this, including inaccurate records or misuse of medicines and money. One definite problem, however, is the system developed for paying VHWs. This was supposed to be set up by the rural councils. In fact, the decisions were made at the department level and everyone was informed by memorandum signed by the Prefet, a department-level political official. The decision on what to charge clients was made in the same way and differed between departments. The situation now is that 60 percent of the hut income is used to pay the three VHWs, 35 percent to buy medicines, and 5 percent for maintenance. With such a large percentage of the income being used to pay the VHWs, there is not enough money for medicine resupply, so huts are forced to close down. Not only was the original design not followed but also the wrong people made the decisions. Furthermore, the decisions were made without sufficient attention to the project design or guidance from advisors to ensure the system's financial viability. As a result of these financial problems, in many villages, one of the three team members—the hygienist—was dropped in order to reduce costs. This worker is the one with primarily preventive/promotive duties.

Other problems at the local level include VHW selection criteria, location of health huts and village management committees. In the first nine months, over one third of the huts lost or changed one of their VHWs. The problem lies primarily in a basic contradiction in the selection criteria which required both strong ties to the village and literacy in French. In practice, literacy was given priority, so those people selected tended to have a

formal education and were young and unmarried. Because literacy in French is an important job skill in Senegal, VWs with this ability tend to seek to better themselves elsewhere. Wisely, many replacements are being found who fit the criteria of stability (older, married, landowners) whether or not they know French.

Rural councils chose hut locations but were not given any guidelines. Council members usually secured one for their village, and a few larger villages were selected regardless of proximity to other huts and health posts. The result is that huts were too close to each other and to the posts, and villagers would often bypass huts to get free medicines and services from posts. In Niore, the first department with huts, one of every three huts closed within nine months of opening. The other departments are anxious to open their huts but have not learned from the mistakes in Niore. Once a site for a hut is known, control of the hut is given to the village management committee. Although committees were formed, they did not actually manage the health team. One treasurer said that since the post chief and the first aid worker were the only ones who really knew what was going on, management responsibility was left to them.

A second priority area for project success is the need for support and supervisory services from the Senegalese government. The many problems at the village level indicate a lack of support services. Promotion Humaine was responsible for working with the rural councils and village management committees.\* Although Promotion Humaine worked to set up the village committees, a lack of follow-up contributed to the difficulties at the local level. With over 100 communities to visit, the time spent in any one village was necessarily brief.

Anthropologist Robert Hall, who studied the program, reports that this low level of effort called for in the project design did hamper the project's community level activities. In his study, Hall found that only a minority of the village population had a clear understanding of the project's objectives, the community's responsibilities, the mechanics of village health worker remuneration, or the arrangements for paying for medicine resupplies once the original stock ran out. Hall found that in the visits to villages, Promotion Humaine placed a greater emphasis on the benefits to be derived from the health care project than the responsibilities to be assumed by village members. As a result few had a clear conception of their role.

The study also points out certain historical tendencies in the Sine Saloum region which made it difficult for any program to elicit strong community support. There is the

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\* The committee consists of a president, treasurer, and an assessor selected by the community. Activities of the committee include: monitoring of health hut receipts, taking inventory of medicine stocks, and ordering and paying for new stock as needed.

...existence of a tendency to view government actions in a way which denies community responsibility for the maintenance and continued operation of an externally sponsored intervention. This tendency is reinforced by a history of government actions in which the role of the local population was dictated from above....In the past public authorities have been unwilling to relinquish control over a program, even though it was carried out through the efforts of local residents and was allegedly designed for their benefit.

Day-to-day project management was designed to be the responsibility of the project director, who heads the project executive committee. However, a project director was not appointed, and the committee never met. The result is that the governor of Sine Saloum runs the project his way and keeps the project checkbook in his desk drawer. Since the governor is an important political figure, there are few checks and balances, and day to day problems are not easily handled.

In the medical area there are also severe supervisory problems. The regional supervisory team (and an AID technical assistance person) are responsible for supervising the health posts. However, they are more interested in and occupied with expanding the project into new areas than in assuring that the existing system functions properly. Furthermore, the department supervision teams that were to provide two full-time staff people to help with supervision at the post and hut level were never established.

According to the project design, sanitary agents are responsible for making supervisory visits to health huts. However, since this class of personnel has not yet graduated from training schools, the supervision of huts has become the post chief's responsibility. However, it was found that his workload was greater than originally anticipated, and visits to huts were infrequent. Visits usually occurred when Peace Corps volunteers took the chiefs out in their cars. Post chiefs are also skeptical about sanitary agents taking over hut supervision, since the chiefs feel that as senior officials, it is their responsibility. Transportation is also a problem in supervising huts. Horses and buggies were provided for visits, but in Nioro they are used only in 3 of 12 posts. Post chiefs resist the loss of status and convenience in using horses, yet there are long delays in repairing cars. A final area of difficulty is that there are serious inadequacies in the records of project activities and use of resources. This makes it difficult to monitor and supervise the system.

The third priority area for the project's success is a reliable pipeline of medicines. It is essential that huts have an adequate supply of medicines or villagers will not use the huts. The AID evaluators could not reach a firm conclusion on this issue. Huts were only beginning to run out of the AID-supplied initial

stock, and so far had been able to resupply at health posts. In the long run, health huts must become financially viable if they expect to afford restocking their medicine supply. There were some problems with the initial supply of medicines. Villagers complained that some basic drugs were missing or in low supply (i.e., diarrhea medicine and aspirin). Also a drug for eye infections did not arrive at the huts until it was within one month of its expiration date. There is also a question of U.S. procurement of project medicines. The problem is having an initial medicine stock with English labels and unfamiliar names and dosages, when the project will later be switching to a permanent local supply.

The Sine Saloum project has serious problems in both its design and management. A few of the design problems have been mentioned; however, the major one is that AID started this large project without the experience of a pilot project to identify problem areas and workable solutions. The project design was also not followed in many important aspects. Lack of a project director and department supervisory teams was a major factor leading to the serious management and supervisory problems. Probably the most important factor, however, was AID's failure to provide the strong cohesive, experienced technical assistance team that the project needed. Although there were supposed to be three AID advisors present throughout the project, the staff consisted of a series of one or two short-term people located in Dakar. AID chose to use a "hands off" style of management, anticipating that the local people would take responsibility for the project. In this case, the responsible national group never exerted the control needed, and neither did AID personnel. A comparison can be made with the similarly designed Fatick project in which the Dutch began with a small pilot project, and the advisors were closely involved in its implementation. The Fatick project has had greater success.

Despite the many failings of the Sine Saloum project, there have been some achievements. In 200 villages, residents organized committees, selected VHWs, and built health huts. Training programs were designed and implemented and training materials developed. There were also a variety of other activities, all of which demonstrate a willingness on the part of villagers to work to improve their health care. Health post records show there has been a substitution effect in that villagers now are having common ailments treated at village huts rather than health posts. A survey of villagers found that a majority felt that there had been improvement in health care since the project started. However, about half gave negative responses on the ability of villages to take on the cost when external help ceases.

After the April evaluation, AID contracted with Family Health Care, Inc., to send a team to Senegal to redesign the project. Since then, a new governor of Sine Saloum has taken office, and control of the project has been transferred to a newly appointed project director. Hopefully, the redesigned project will be better managed so that the villagers, who are willing to contribute to better health care, will receive more than unfulfilled promises.

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### Interview:

Graham Kerr (by phone), Bureau for Program and Policy Coordination, Office of Evaluation, USAID/Washington, September 24, 1980.

SUDAN

IDENTIFICATION

Project Name and Number: Northern Primary Health Care Project, Number 650-0011

Location: Twelve Provinces in Northern Sudan

Project Dates: FY 1979 - FY 1982

Funding Level and Source: USAID: \$5.8 million  
African Development Bank: \$8.0 million  
Government of Sudan: \$ .89 million

Responsible Offices: Health Officer, AID/Sudan  
Bureau for Africa, Office of East Africa Affairs, AID/Washington

Principal Contractor: Medical Service Consultants, Inc.

Implementing Agency: Ministry of Health (MOH)

## COUNTRY STATISTICS

Total Population: 18.7 million

Rural Population: 75%                      Infant Mortality Rate: 141

Population Growth Rate: 3.1%              Life Expectancy at Birth: 46

GNP Per Capita: \$320                      Adult Literacy Rate: 20%

## SYNOPSIS

This AID project will help implement the national primary health care program in twelve northern provinces with special emphasis on the poorest four. Community health workers (CHWs) will be trained and returned to their rural villages or nomadic tribes to provide preventive and curative health care. The national PHC system--which began a few years ago--has had problems in management, defining the role of CHWs, and long-term financing. The AID project made limited progress in the first year, due in part to a lack of staff continuity. Several key tactics are still being worked out with the Sudanese Ministry of Health.

## BACKGROUND

Sudan is Africa's largest country, covering an area nearly as large as Western Europe. It stretches from the Sahara in the north to the tropics in the south. The Sudanese people are approximately two-thirds Moslem Arabs living in the north and one-third African animistic peoples in the south, further divided into an estimated 6 separate ethnic groups. In the northern regions a large percentage of people lead nomadic or seminomadic lives, breeding cattle or camels.

The major health problems of Sudan, also common to other developing countries in Africa, include endemic, infectious diseases, lack of safe water supply, maternal and child health problems, and malnutrition. Problems within the health sector infrastructure include a shortage and maldistribution of health manpower and facilities, deficiencies in budgetary resources, and a low priority placed on health compared to other development sectors. There are 18 health administrative divisions (provincial), 12 in the four northern regions under the Ministry of Health (MOH) in Khartoum, and six in the southern region coordinated by the Southern MOH in Juba.

In 1975, the Government of Sudan (GOS) with the assistance of the World Health Organization and other donor agencies developed a National Health Plan for 1977/78-1983/84. Programs were developed for each of eight priority areas including primary health care. Due to geographical, cultural, and political differences, separate primary health care programs (PHCPs), were developed for the

northern and southern regions in 1976. (See the Southern PHCP report.) At that time the GOS began implementing the Northern PHCP and in September 1979, an AID-sponsored team began working with national and provincial MOH officials.

### PROJECT DESCRIPTION

The purpose of the Northern Primary Health Care Project (NPHCP) is to reach the country's rural population with a comprehensive health delivery system that relies on community participation. This is being accomplished through training Community Health Workers (CHWs) selected by their own communities to provide basic preventive/promotive and curative medical services. They will staff primary health care units (PHCUs) being built by communities to serve an average of 4,000 people. For every 5 PHCUs, a dispensary will be provided for referral, supervision and drug supply. Medical assistants (MAs) will staff the dispensaries and supervise CHWs.

To serve the large nomadic population of the eastern and western regions, a separate category of CHW will be trained—the nomad community health worker (NCHW). They will be recruited from each of the nomadic clans (one NCHW per population of 1,500) and selected and supervised by the clans' nomadic councils. To adapt to these special circumstances, the PHC program will be made more flexible, simple, and acceptable to nomadic communities. Existing health services will handle referrals.

The GOS began implementing the national PHC program in 1976 and has received assistance from a variety of outside donors. By January of 1978, over 425 PHCUs were renovated or built, baseline studies were started, a health information system was being tested, tutors for CHWs were being trained, and medical stores were being established. Also, by the end of 1979, about 1,200 CHWs had been trained. The AID-funded team arrived in the field in the fall of 1979 and began developing a work plan along with MOH counterparts. The program has been operating in all of Northern Sudan, but AID will concentrate on the four poorest provinces of Northern Darfur; Southern Darfur, Northern Kordofan, and Southern Kordofan. The four major areas of project outputs are: training primary health care personnel; building PHCUs; developing information/evaluation systems; and upgrading medical logistics/supply.

### IMPLEMENTATION EXPERIENCE

#### The National Primary Health Care Program

Sudan has been implementing the PHCP throughout Northern Sudan since 1976, and a number of problems have surfaced. Problems include health system management, defining the role of CHWs, and long-term financing.



The Sudanese health system has a variety of management problems. The referral system between health facilities is not clear and sometimes not appropriate for existing lines of public transportation. Also, people tend to go directly to the larger and more specialized units. Within provinces there is not a clear pyramid of health care management. Staff supervision from one level to the next is irregular and insufficient. Management of supplies has been difficult due to a lack of warehouse space, data processing, railroad problems, and a lack of coordination with other parts of the health care system.

When the National Health Program was developed, it concentrated on bringing services to rural areas, but planning for the necessary systemic changes in the design of total health care in Sudan was left on the sidelines. Another factor contributing to management problems is the government's efforts to decentralize its administrative functions. Many planning and budgetary decisions now occur at the provincial level, which may not yet be fully prepared for it. There is also an absence of management training for health personnel and a lack of resources for such training within Sudan.

A second problem in the NPHCP is defining the role of Community Health Workers. The original plan was for CHWs to bring preventive health services to rural areas, with curative care being of secondary importance. However, CHW training has tended to emphasize curative rather than preventive functions, mainly because trainers have been "curative oriented" medical assistants. Indeed, the public demands curative services, which motivate CHWs to improve clinical rather than public health knowledge. CHWs have been assigned too heavy a work load in many cases, servicing areas with populations 4 to 6 times that specified in the original plan. Also, the scope of their responsibilities and the length of training are too demanding.

Some of the problems in defining the role of the CHWs are due to the fact that the position was newly created as part of the PHC plan. CHWs and the public were not prepared for the intended emphasis on preventive services, and the demand for curative services may have been greater than anticipated. Now it may be necessary to provide the wanted curative services in order to make preventive services effective.

Another issue of concern is the program's long-term financing. It was originally anticipated that the GOS could pay recurrent costs; however, it now faces a balance of payments crisis. Debt servicing obligations have severely reduced the foreign exchange available to buy drugs and fuel. Villagers have helped construct PHCUs, but the people are too poor to consider establishing a fee-for-service system. CHWs were supposed to be paid by the communities; however, they are now "temporarily" being paid by the MOH until an alternative means is found. Villagers, however, now

expect free services and are unlikely to be willing to pay for CHW services. Also, CHWs like their status as government civil servants and would resist change. MOH officials are now experimenting with placing collection boxes at health facilities. All things considered, however, continued external assistance may be the only way to continue the program in the near future while some means of long-term financing is developed.

To respond to some of these problems, AID's new Rural Health Support Project (650-0030) was authorized in August, 1980. It will continue and expand upon the present program in both the four poorest northern provinces where AID is now active and in the southern region. Management training will be provided for health administrators at the central, regional, and provincial levels. The project will underwrite the cost of \$2.2 million in drugs and supplies. It will also strengthen the logistical system by providing bicycles and motorcycles and by using radio broadcasts to educate CHWs and the public.

The following chart summarizes the project's status as of April 1980.

CURRENT PROJECT STATUS

OUTPUTS	STATUS
1. Training: Reorientation courses for medical supervisors, refresher courses for CHWs, third country training for 36 Deputy or Assistant Health Commissioners, long-term U.S. training for 3 GOS health officials, short-term U.S. training for 12 MOH personnel.	1. Long-term U.S. training for 2 GOS health officials to begin in January, 1981.
2. PHCU Construction: 35 PHCU units.	2. Meetings between an AID engineer, the MOH, the Ministry of Public Works, and project staff have taken place to discuss procedures and design of the units.
3. Information/Evaluation System: Standardized national data system, improved vital statistics registration system, PHCP data forms distributed, information sharing between northern and southern projects, 1980 data survey, short-term advisor reports, mid-course evaluation.	3. PHCP data forms being tested, final form to be divided later in 1980. Training for statistical clerks planned for late 1980. Health information officer has worked with counterparts on reporting format for all levels of health infrastructure and with the Department of Health Statistics

in developing a monthly statistical report on diseases and other health information.

Logistics/Supply System: Design and implement national logistics system. Improve equipment/supply delivery, delivery of initial equipment/drug supplies to 35 PHCUs.

4. Training for mechanics planned for late 1980. Short-term U.S logistics training for 2-4 people also planned.

Medical Service Consultants, Inc. (MSCI) was selected by AID as the contractor for the project. In September 1979 the MSCI field team, which consisted of a chief of party (a PHC physician), a health information specialist, and a supply and logistics specialist, arrived in Sudan's capital of Khartoum. They began working with their MOH counterparts in developing workplans for the first year of activities.

From the beginning, staffing problems arose. AID did not have a health specialist in Sudan when the project began, so the Mission's Development Officer served as Project Officer until a health officer arrived in mid-1980. Within a month of his arrival, the MSCI chief of party resigned due to contractual problems (December, 1979). Until a new Chief of Party arrived in April, the health information specialist served as acting Chief of Party, receiving temporary back-up from MSCI Washington staff.

The absence of key personnel hindered project implementation and contributed to some early communications problems among the MOH, AID, and MSCI. Fortunately, by the time of an AID project evaluation in September 1980, the key positions had been filled, and all parties had begun to participate in regularly scheduled meetings. Lack of personnel during the first year, however, contributed to problems in some areas of project activity, such as training PHC personnel. Training initiatives did begin, however, after the arrival of the new Chief of Party in April 1980, and long-term U.S. training for two GOS health officials was scheduled to begin January 1981.

An issue which developed between AID and the MOH was whether to construct dispensaries or PHCUs in the four western provinces. AID argued that it needed to monitor the construction of the units and that this would be almost impossible in the vast area which would be covered if PHCUs were to be built; whereas, the more costly dispensaries would be easier to monitor since fewer would be built and in larger, more accessible villages. The MOH argued that PHCUs were called for in the project agreement and that plans had already been made and the provinces informed of the MOH's intentions.

The health information specialist has contributed to significant progress in the area of health information system development. A nationwide health information system exists although figures usually differ depending on their sources, and they are often estimates. The AID project personnel intend to develop an improved system suitable for application in twelve provinces that can then be replicated in other areas. Activities in this area include: working with counterparts on a demonstration project in Khartoum Province and Red Sea Province to test data forms, establishing a report format for all levels of the health infrastructure, and developing a monthly statistical report on disease and other health information to be used by the Department of Health Statistics. A training session for statistical clerks was planned.

Some serious logistical problems emerged during the first year of the project. The initial shipment of 26 4-wheel drive station wagons arrived on time, although a variety of preparatory activities, such as designing and printing forms for drivers and monthly province reports had not been completed. Rather than waiting for these forms, as well as for proper documentation and mechanical preparation, the Sudanese MOH had the vehicles immediately sent to the field. Two of the vehicles were based at the MOH in Khartoum.

The MOH would not assign a vehicle for the sole use of the MSCI staff; however, a vehicle was available from 7:30 a.m.-2:00 p.m. if MSCI staff were accompanied by MOH staff and if the vehicle was requested in advance on a day to day basis. Because of this inconvenience, the MSCI staff rented a taxi for use in Khartoum, and relied on public transportation to get to the field. Because of climatic conditions and the absence of roads, this usually meant flying, which in Sudan may require going to the airport for three days before making the desired flight.

Vehicle maintenance has been difficult. Repair and maintenance of the station wagons are the responsibility of the provinces and for the two vehicles based in Khartoum of the MOH or Ministry of Transport garages. Reports have shown that the vehicles have not been properly maintained and 25% of them were out of commission after only 3 months of operation. Some spare parts for those U.S. vehicles finally arrived at the end of 1980 but additional ones are still missing. There were, however, some accomplishments, including the renovation of a warehouse for spare parts, and completion of plans for a mechanics training course scheduled for late 1980 and for sending 2-4 people for short-term U.S. training. Twenty-four project trucks still had not arrived in Sudan by late 1980 because of a strike at the truck factory and shipping delays.

In the first year there has been limited progress in logistics, despite the many efforts of the logistics/supply

advisor. The original logistics/supply advisor left the project in August 1980, and a replacement arrived in October 1980. During the September 1980 AID evaluation, the need for better maintenance, proper documentation, and record-keeping was recognized by all parties; additional support was planned to assist the new advisor.

After the September, 1980 AID evaluation, a number of changes have been made in the project. Since the Dutch Government is building PHC units in North Darfur Province, it was decided by AID/Sudan to avoid duplication and utilize construction funds in other needy provinces. Therefore, other activities (training, logistics, and health information) are being carried out there.

In summary, the Northern Sudan PHC projects has lived through some growing pains, due to AID and MSCI staff changes and to the logistical challenges of working in the project area. It is hoped that the stage is now set for stable project progress.

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by C.A. Markarian, Chief of Party, MSCI.

### Interviews:

Catherine Ekinoff, Medical Service Consultants, Inc., October 28,  
1980.

Howard G. Miner, APHA Consultant, October 28, 1980.

**SUDAN**

**IDENTIFICATION**

Project Name and Number:	Southern Sudan Primary Health Care (OPG) Project, Number 650-0019
Location:	Southern Region
Project Dates:	FY 1979 - FY 1983
Funding Level and Source:	USAID:               \$2.2 million  Government of Sudan:               \$1.3 million  Others: Maryknoll Fathers, Lutheran World Federation, Sudan Council of Churches
Responsible Offices:	Health Officer, USAID/Sudan  Bureau for Africa, Office of East Africa Affairs, AID/Washington
Principal Contractor:	International/African Medical and Research Foundation (management of the project's technical and administrative staff)
Implementing Agencies:	Regional Ministry of Health (RMOH)

## COUNTRY STATISTICS

Total Population: 18.7 million

Rural Population: 75%

Infant Mortality Rate: 141

Population Growth Rate: 3.1%

Life Expectancy at Birth: 46

GNP Per Capita: \$320

Adult Literacy Rate: 20%

## SYNOPSIS

The Government of Sudan (GOS) has developed a comprehensive plan to bring primary health care services to its predominantly rural population. With the exception of the training component, the project is behind schedule, primarily due to logistical difficulties. There are also staffing and financial problems. Another project was recently authorized to bring additional resources to these problem areas.

## BACKGROUND

Until the 1972 Peace Accord, Southern Sudan endured seventeen years of civil and political disruption which left it in worse condition than the nation as a whole. (See the Northern Primary Health Care Project summary for more complete background information.) During the years of strife, the region's social and administrative infrastructure was devastated. Health care personnel were dispersed and health facilities destroyed.

The South has a tradition of tribal and ethnic divisions. It has African tribal cultures, in contrast to the predominantly Moslem Arab culture of the North. Per capita income is even lower in the South than in the rest of the country, and the death rate is twice as high. There is a severe lack of transportation and communications.

In 1975, the Government of Sudan (GOS), with the assistance of the World Health Organization and other donor agencies, developed a National Health Plan for 1977/78-1983/84. Programs were developed for each of eight priority areas including primary health care. Due to geographical, cultural, and political differences, separate primary health care plans (PHCPs) were developed for the northern and southern regions in 1976.

The African Medical and Research Foundation (AMREF), has been working in Southern Sudan since the end of the Sudan civil war in 1972. AMREF participated in planning the southern PHCP, and in 1976, at the request of the Regional Ministry of Health (RMOH), began implementing the plan by training primary health care personnel. In 1979 AMREF contracted with AID to assume overall project management.



## PROJECT DESCRIPTION

The purpose of the Southern Primary Health Care Project (SPHCP) is to provide the country's rural population with comprehensive health services that rely on community participation. This is being accomplished by training community health workers (CHWs) selected by their own community to provide basic preventive/promotive and curative medical services. CHWs will staff primary health care units (PHCUs) being built by communities throughout the region to serve an average of 4,000 people. A dispensary will serve every 5 PHCUs for referral, supervision, and drug supply. Medical assistants (MAs) will staff the dispensaries and supervise CHWs. The four major areas of project outputs are: training primary health care personnel; construction of PHCUs by local people and the building of training schools/dispensaries; development of information/evaluation systems; and upgrading medical logistics/supply.

A regular evaluation by AID, completed in March 1980, noted the following specific outputs in the first year.

Training - One week refresher training courses were given to 122 PHC personnel, including CHWs, MAs, and sanitary overseers. The planned schedule called for 1,331 people to be trained by the project's end. The CHW training manual has been revised twice and approval and adoption by the Regional MOH is expected by the end of the year. A training program for sanitary overseers has been developed and a public health officer to assist in the activity has been hired. In FY 82 two RMOH staff people will be given long term training in the U.S. (M.A. degrees) and five will be given short-term training in a third country.

- Construction - The project's planned ten PHCUs were to have been completed in FY 1980, but have not yet been started. The two CHW training schools and affiliated dispensaries planned were scheduled to be completed in FY 1980. One is almost complete and the foundation has been laid for the second.
- Information/Evaluation Systems - Each of the six provinces in the southern region are to have a baseline study and follow-up survey for a total of twelve studies. Four were to be completed in FY 1980, but only one baseline study was completed, and the data from another is being analyzed. The CHW monthly reporting form was revised and instructions prepared for its use. Forms to evaluate CHWs have been developed and are being pretested. In FY 1981, inservice training is scheduled for PHCP data collection personnel.
- Medical Logistics Supply Systems - The reporting, accounting, and drug distribution systems were upgraded at the regional PHCP medical store. The PHC drug list was revised.

## IMPLEMENTATION EXPERIENCE

As the AID grantee, AMREF has hired technical and administrative personnel for the project. The RMOH has counterpart personnel on the project staff, who at the project's end will assume management from AMREF.

As of March, 1980, when an AID evaluation was completed, the project was behind schedule in all areas, except the training of PHC personnel. The primary reason for project delays is the logistical situation. Other issues of concern are staffing, finances, and defining the role of CHWs.

Any program in southern Sudan faces enormous logistics problems. Sudan is the major source of fuel and supplies are extremely variable. Air Sudan has few flights to the South and at times cancels all flights because there is no fuel for a return trip. For the first year of the project the only supply route to Juba, seat of the Southern Regional Government, crossed through Uganda and was closed for six months due to the political upheaval there. These problems have caused delays in many areas. The lack of fuel and construction materials has delayed the building of two CHW training schools and dispensaries, 10 PHCUs, and project staff housing. The difficult logistical situation has also led to weak field supervision of CHWs. This is understandable considering the project's shortage of fuel and the size of area to be covered—larger than the state of Texas.

Staffing the project has also been a problem. Although the project's success depends heavily on a fully-staffed Public Health Care Department to eventually assume full control, there are a number of staff openings due to lack of qualified Southerners. The Director of the RMOH is therefore advertising key positions in Northern Sudan. Partially due to delays in building staff housing, AMREF had difficulty staffing the project with long-term personnel in the first year. What was accomplished was in large part due to technical support from AMREF's Nairobi office. The key positions were filled by March 1980. A volunteer funded by the Canadian University Service Organization was to coordinate the building of PHCUs. Unfortunately, he proved to be ineffective and a replacement is being recruited. Also, in January 1980, the position of project manager was added to the staff. The medical training officer was originally serving both functions but spent an inordinate amount of time on administrative problems rather than training.

There have also been problems in defining the role of the community health worker. The original plans were for CHWs to bring preventive and promotive health services to rural areas, with the curative aspects having secondary importance. In the past, however, the curative side had been dominant in the health system; moreover, the experience of the CHW trainers is weak in preventive/promotive care and in the communication and organizational

skills needed to foster community development. Also, according to villagers, curative care is more important, so that the effectiveness of preventive/promotive care measures often depends on the quality of curative care. Related issues are whether the scope of CHW activities and the length of training are too demanding. The problems surrounding the role of CHWs are due in large part to the fact that the position was newly created as part of the PHC plan. The need for preventive/promotive care is great, but the original plan may have been too rigid to follow under the difficult circumstances of Southern Sudan where basic curative services are needed and wanted by rural people.

Escalating costs and funding difficulties have also caused problems. Due to construction delays, contractor insurance coverage was extended, thereby increasing total insurance costs. To bring commodities through Uganda, shippers placed a twenty percent surcharge that increased the cost of construction materials. The inflation rate is at an unexpected rate of 28 percent, and labor costs for construction have also gone up. Even more serious is the crisis situation with respect to GOS balance of payments. The dramatic climb in debt service obligations has caused a severe reduction in foreign exchange available to buy drugs and the fuel necessary to transport them to rural PHCUs. An important issue which has not yet been addressed is the long-term financing of the SPHCP. At present the RMOH is paying health care personnel salaries, but there may be insufficient funds when external assistance ends. Some form of reliable local financing, beyond collection boxes which are now used on a pilot basis, may have to be developed.

The Southern PHCP's deadlines appear to be unreasonably tight, given the lack of even an elementary logistical system, lack of health infrastructure and personnel, and the region's extreme poverty. To deal with these problems, the Rural Health Support Project (650-0030) was authorized in August of 1980 to continue and expand upon the present program. The new program will cover both the southern region and the four poorest regions in Northern Sudan. Special emphasis will be placed on strengthening the logistical system through the provision of bicycles and motorcycles, and the use of radio broadcasts to educate CHWs and the public. There will be an effort to strengthen planning and management functions at the central, regional, and provincial levels. This will include training programs for health administrators at each level. In response to funding problems, the project will underwrite the cost of \$2.2 million in drugs and supplies to be used throughout the project.

Increased emphasis will be placed on maternal and child health/family planning which was given high priority in the National Health Plan, but has not yet been integrated into the PHCP. There may be difficulties in having CHWs, who are almost all men, delivering MCH/FP services in a culture where men are not

accepted for maternal care. It is planned that this new project will use phased planning and implementation to allow the necessary flexibility to accommodate diverse cultural and demographic characteristics.

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### Interview:

Dr. Michael Gerber (by phone), International/African Medical and Research Foundation, September 5, 1980.

SWAZILAND

IDENTIFICATION

Project Name and Number:	Health Manpower Training, Number 645-0062
Location:	Nationwide
Project Dates:	FY 1977 - FY 1982
Funding Level and Source:	USAID: \$4,300,000
	Government of Swaziland: \$1,593,000
	United Kingdom: \$1,387,000
	WHO and the Canadian Inter- national Deve- ment Agency: \$468,000
Responsible Offices:	Health Officer, USAID/Swaziland  Bureau for Africa, Office of Southern African Affairs, AID/Washington
Principal Contractor:	Medical Services Consultants, Inc.
Implementing Agencies:	Ministry of Health, (MOH)

COUNTRY STATISTICS

Total Population: <u>0.6 million</u>	
Rural Population: <u>92%</u>	Infant Mortality Rate: <u>168</u>
Population Growth: <u>2.8%</u>	Life Expectancy at Birth: <u>46</u>
GNP per Capita: <u>\$590</u>	Adult Literacy Rate: <u>30%</u>

## SYNOPSIS

The Swaziland Health Manpower Training Project is based on the premise that primary health care must have adequate logistical support and referral sources if it is to be effective and widely available. Consequently, the project's goals are to: (1) train nurses and other paramedical personnel for MOH health delivery and administrative positions; (2) institutionalize this training capacity; and (3) strengthen the planning and administrative capability of the MOH in order to expand the delivery of preventive and curative services to the Swazi population. Funding is provided for these project elements as well as for the construction of the Institute of Health Sciences where the health personnel training takes place. Although its immediate impact on primary health care or rural health services may not be significant, indirectly the project does foster extended health care coverage, particularly in rural areas.

## BACKGROUND\*

Swaziland gained its independence in 1968 after sixty-five years as a British colony. During the period of British rule, the Swazi educational system remained underdeveloped while expatriates ran the civil service and filled professional positions. To this day the impact of such an inadequate and ineffective education system is felt: there is an acute shortage of trained Swazis at all levels. As a result, non-Swazis hold many skilled positions, and other positions are vacant. Until the Institute of Health Sciences was built and staffed, Swaziland was probably the only Commonwealth African country that did not operate a public training school for nurses and other health personnel.

## PROJECT DESCRIPTION

The purpose of the Health Manpower Training project is to increase the number and skill level of Swazi health personnel. During and since the construction of the Institute of Health Sciences (IHS), consultants, long term advisers, and their Swazi counterparts (when available) have worked on the curriculum design for nursing students and health inspectors at the new facility, recruited faculty and students for training, and given on-the-job training to Swazi participants on administrative, analytical, and planning methods.

The nurses who will be graduating from the IHS are being prepared to staff rural clinics. Their study program and practical

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\* Please refer to the other Swaziland project summary for more detailed background information.

work emphasizes preventive health care, skills in accurate diagnosis and treatment of common illnesses, and community health work, in contrast to the hospital orientation of previously trained nurses. The curriculum designers have worked to strike a proper balance in the nursing curriculum between national health activities, including environmental sanitation and disease control, and community health services responsible to client-felt needs, such as maternal and child health.

After three years of general training, nursing students will specialize for a year to become public health nurses or nurse practitioners. Graduates will then go on to work in rural clinics. Lesser trained nurses who have staffed the clinics prior to this program are receiving inservice training to augment their skills. It is important that personnel at the private hospitals who train auxiliary nurses seem willing to modify their programs in order to coordinate with the MOH's plans and activities.

By the end of the project it is planned that the number of IHS graduates will match the annual employment capacity; the minimum annual recruitment of new students will be high enough to compensate for attrition and to produce an output of 20 new Swazi nurses per year.

Prospective Swazi tutors are receiving their training at U.S. universities. These women already have a degree in nursing, and are studying in the U.S. for a bachelor's degree in nursing education. Prior to their departure for overseas education, the prospective nursing tutors participated in a basic science program in Swaziland so they were better prepared for their studies abroad. Long term advisers are teaching the classes at IHS until the end of the project when the Swazi instructors who will have returned from their training replace them. It is hoped that there will be some overlap so the transition is relatively easy.

In order to maximize the health resources that will be made available through the nurse and health inspector training programs, the MOH's planning and administrative capabilities must be increased, particularly at the mid-managerial level. Presently doctors, nurses, and other health workers do the administrative work in the field. The introduction, through this project, of a cadre of workers with managerial and administrative skills can permit these scarce medical personnel to devote more time to direct service activities.

Toward this end, the Health Manpower Training project is using participant training to prepare several categories of managerial personnel. Three U.S. long term technical advisers are in place helping to develop improved systems for hospital administration, rural health services administration, and the



collection of health statistics. At the ministry level, the project is working to produce a competent health statistician and health planner. Currently, planning work is carried out jointly by all senior level personnel within the Ministry. These responsibilities must be centralized in order to increase the MOH's efficiency in these areas.

At the field level, two categories of managerial personnel are being trained: hospital administrators and rural health service administrators and planners. Through these personnel, the project is encouraging regional coordination of various health-related activities. An improved MOH infrastructure at all levels will promote the integration of preventive and curative services and simultaneously result in a more cost effective use of resources.

### IMPLEMENTATION EXPERIENCE

The following chart describes the project's status.

#### CURRENT PROJECT STATUS

##### A. Health Manpower Training and Institutionalization

OUTPUTS	STATUS
1. Institute of Health Sciences (IHS) constructed for training of RNs, health inspectors (HI), allied health personnel.	1. Construction of IHS on schedule. Administrative actions for recognition of IHS as national institute under way. The IHS principal has been appointed.
2. Four-year RN curriculum developed and designed to produce 20 RNs per year by 1984.	2. First and second year of curriculum completed and approved. Work on third year nearing completion. First class of 23 RN students admitted to IHS for January 1980. Second class (18) admitted 8/80. First set of nurses have been through post-basic practitioners program and second class underway. Rural training sites for clinical and practical experiences have been selected.
3. HI curriculum developed, training 15 HIs per year.	3. WHO advisor developed HI curriculum for class of 8. HIs entered IHS January 1980. Second class of 12 has entered.
4. Swazi nurse faculty (7) selected and trained for	4. Swazi nurse faculty selected with five participants having

IHS RN program.

departed for training September 1979. Another left 9/80. One planned to depart 9/81.

5. Inservice nurse practitioner program developed for MOH RNS.

5. One NP inservice training program conducted for 16 RNS in 1979. The second NP group currently in training.

## B. Health Planning and Administration

1. Decentralization of MOH services into four regional or district administrative units.

1. Four regions identified, with Shiselweni district-region selected as pilot area for regional administration.

2. Establishment of Regional Health Administrative System.

2. Positions for four health administrators have been established. Systems analysis of rural health services initiated by TA.

3. Establishment of hospital administrative system within each region.

3. Hospital administrator TA in place and counterpart assigned. Systems for financial management, food service, drugs, and supply procurement initiated on regional basis.

4. Establishment of health statistical unit in the MOH.

4. Health statistician TA arrived in the 12th month of project. Counterpart assigned, and unit for health statistics established. A new health information system is being developed and tested.

5. a. One health planner.

5. a. Participant selected; post established; participant departed for training January 1980.

b. One health statistician

b. Post established and counterpart in place.

c. Four hospital administrators, four rural health administrators.

c. Four posts established, and three counterparts selected.

The Health Manpower Training project is underway. The biggest problem has been assigning counterparts not only for the training program but for the administrative component as well. The selection of nine tutors at the IHS has reduced the number of qualified nurses available for advanced training. Once the IHS starts producing graduates, though, participants can be selected from this group for tutor training.

Another initial problem in the training element of the project is that while the required number of faculty has been selected, no allowance has been made for attrition. To maintain the necessary number of tutors, the project staff is encouraging the MOH to send one or two participants abroad each year for higher level training.

No participant has been identified yet for the health inspector training program, who can be trained to replace the WHO tutor. The GOS did not include a health inspector tutor position among those approved in 1979.

While the MOH has accepted the fact that the purpose of the training program is to institutionalize training and to localize this capability, the concept of institutionalizing an administrative system is not as well understood. This reflects a fundamental philosophical difference between AID and MOH which is hindering progress. AID is concerned with training personnel and with establishing systems which will endure and function effectively once non-Swazi support is gone. The MOH, on the other hand, emphasizes operational accomplishments and the output of goods and services now. It is more concerned with what is produced in the immediate present than with organizing and implementing that which would contribute most effectively to the future.

In addition, the project's administration and planning goals are not being reached because the MOH is having difficulty recruiting the necessary Swazi personnel. Although without counterparts to train, AID (MCSI) does not have the minimum number of people to effectively staff the MOH, the MOH has made tremendous progress in the past year with the assignment of counterparts.

Another impediment to the project's success is the lack of simultaneous decentralization of other ministries. Consequently, even if the MOH can rectify its problems without parallel development and decentralization of other ministries, (such as the Ministry of Transportation), the strengthening of administration and planning within the MOH can be accomplished only to a limited degree.

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### Interviews:

Catherine Ekimoff, Director, Administration, and Patricia McGrath,  
Project Manager, Medical Service Consultants, Inc.

Joy Riggs-Perla, Africa Bureau, AID, July, 1981.

Winter 1981

SWAZILAND

IDENTIFICATION

Project Name and Number: Rural Water-Borne Disease Control Project, Number 645-0087

Location: Nationwide

Project Dates: FY 1980 - FY 1985

Funding Level and Source: USAID: \$3,296,800  
Government of Swaziland: \$1,319,200  
Rural Communities: 10,000

Responsible Offices: Health Officer, USAID/Swaziland  
Bureau for Africa, Office of Southern African Affairs, Development Resources, AID/Washington

Contractor: Academy for Education Development Washington, D.C.

Implementing Agencies: Ministry of Health (MOH)

COUNTRY STATISTICS

Total Population: 0.6 million

Rural Population: 92% Infant Mortality Rate: 168  
Population Growth: 2.8%\* Life Expectancy at Birth: 46  
GNP per Capita: \$590\*\* Adult Literacy Rate: 30%

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\*3.4% according to the FY 1983 Country Development Strategy Statement  
\*\*\$45 in traditional sector according to Syncrisis, p. 101.

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## SYNOPSIS

After carrying out a nationwide survey to determine the location and prevalence of schistosomiasis, the Rural Water-Borne Disease Control Project will seek to combat this disease by developing an ongoing health education program and by implementing a latrine construction program. Since the Swazi government will conduct these activities, a priority of the project will be to expand the GOG's capacity to develop its programs for sponsoring and promoting safe water and environmental sanitation. No progress reports are available yet, though all of the team members, except for one technician have arrived in Swaziland.

## BACKGROUND

A small, landlocked kingdom, Swaziland is surrounded on three sides by South Africa and shares a 70 mile border with Mozambique. Despite the country's small size, it encompasses four distinct geographic regions, each marked by a different terrain, temperature, and rainfall. While certain tropical diseases such as trypanosomiasis and onchocerciasis do not plague Swaziland, the morbidity and mortality associated with diseases related to water quality and environmental sanitation are very high. Data on the health status of the Swazis are sketchy, but it appears that water related diseases such as schistosomiasis, malaria, childhood diarrhea, amoebic dysentery, and typhoid compose a significant proportion of the hospital and clinic patient load.

A current priority of the Swazi government is to develop agricultural water resources: ponds, reservoirs, and canals are being created at a rapid rate. As more and more water resources are developed, the incidence of water-related diseases is likely to increase unless health criteria are integrated into water-supply programs. Poor environmental sanitation and improper excreta disposal contribute to the water-related disease problem. Less than 16 percent of the rural population have latrines.

The responsibility for the organization and planning of health services in Swaziland rests with the Ministry of Health (MOH). Currently the MOH is developing a plan of "decentralization and integration" aimed at lessening the dichotomy between curative and preventive services and gradually decentralizing its administrative structure. Although the colonial health system is gradually changing, health care services continue to be poorly distributed. Only 17 percent of the Swazi population lives in cities, but most hospital beds, doctors, and nurses are concentrated in these urban areas.

Health services are provided by government, mission, occupational, and private practitioners at clinics and hospitals run by the MOH, Nazarene and Catholic missions, and private companies. Although a shortage of staff and sometimes supplies hurts the quality

of care, modern health services are readily accepted and used by the rural population, according to AID's project paper. Clinic distribution is fairly even, and by 1984, most rural Swazis will live within five miles of a clinic. Mothers usually take their children to the clinic, but adults are more reluctant to go for their own treatment and still seek the assistance of a traditional healer. Nonetheless, most Swazis incorporate both traditional and modern concepts into their view of the causes of illness and use both health systems.

Although a variety of institutions deliver health services, there is little coordination among them. In addition, planning efforts are handicapped by the lack of trained Swazi health statisticians, planners, and administrators and the concomitant dearth of reliable data on morbidity and mortality. Skewed budget allocations create another impediment: the GOS's stated health priorities and actual health expenditures do not match—hospital services absorb 70 percent of the MOH budget, compared with 20 percent for preventive services and 10 percent for clinics and headquarters expenses combined.

The MOH has direct responsibility for control of water-related diseases, since curative and preventive programs, environmental control measures, health and sanitation education, and the construction of latrines all come under its auspices. In addition, the MOH is involved in rural water supply programs (a responsibility of the Ministry of Agriculture) in an advisory capacity. Problems of transport, manpower shortages, and coordination of the two ministries have prevented the vigorous implementation of sanitation programs.

Though the Health Education Unit within the MOH is charged with supporting all MOH services, it apparently has had no official status within the GOS: its staff is seconded from other units within the MOH, the director is a WHO consultant, and it has had no official budget of its own.

#### PROJECT DESCRIPTION

One of the project's first activities is to conduct a nationally representative schistosomiasis survey. To accomplish this, the GOS bilharzia laboratory will be renovated and better equipped and the staff will receive training in surveillance and diagnostic procedures. In recent years, the laboratory has concentrated on control programs for either malaria or schistosomiasis, depending on which problem was most serious at the time. Lately, emphasis has been on malaria control, so that particular program is adequate. The schistosomiasis program, however, is in need of updating and expansion. A U.S. epidemiologist will be providing the technical assistance and training required to accomplish the objectives in this portion of the project.

Throughout the water-borne disease control project, strong emphasis will be placed on developing and organizing programs that will be continued by the GOS. During the six-year life of the project, only a limited amount of coverage can be accomplished; hence, it is essential that the GOS, and within it, the MOH, develop the capacity to plan and implement programs that will affect the Swazi people's attitude and practices regarding health. Concentrated efforts for priority setting, manpower upgrading, and organization will be made to ensure this development occurs.

The Health Education Unit (HEU) within the MOH will be upgraded and institutionalized in the course of the project so that a national health education strategy and plan can be developed. To prepare for this activity, three women will receive academic training in an African institution so they may then effectively staff the HEU. Also, an AID health education advisor will provide assistance to the MOH. (In order to institute the best program possible, a social science adviser and his counterparts will conduct a 'knowledge, attitudes, and practices study and survey to learn and understand the health and sanitation-related behavior of rural Swazis.)

It is worthwhile to note that up to one-third of the homesteads in Swaziland do not have an adult male and that about one-fifth of the homesteads are headed by women. This occurs because many of the men are employed in South Africa. A consequence is that women will be the primary point of contact among the rural population for this project. Women, whether or not they are household heads, are responsible for child care and education, most water and food related tasks, household maintenance, the health of their families.

The strategies and plans determined by the HEU will eventually directly affect the community level by means of the community based workers trained in water and sanitation techniques. Very few government positions will be created. Instead, existing health and field workers will be retrained and their skills upgraded through in-country training programs designed specifically for community level health personnel. These workers are expected to teach the rural population about (1) proper storage, handling, and use of water; (2) proper excreta disposal practices; and (3) avoidance of water contact in areas of high snail infestation (i.e., where schistosomiasis is present).

Community sanitation committees will be another means by which rural people will be able to learn about health and sanitation relating to water. Sanitation workers will give training in the construction of latrines to teams of two or three people elected by the community.

On-the-job training will be provided during the latrine construction demonstration program so that after the demonstration phase is over (and approximately 2,000 pit latrines have been



built), the team members will be responsible for supervising and monitoring further latrine construction. Homesteads receiving demonstration latrines will provide labor for digging the pit and for constructing the superstructure. Homesteads will be chosen for the latrine project based on family income levels and the availability of family labor.

Periodically throughout the course of the project, evaluations will be conducted to determine how effective and useful project activities have been. The final project evaluation will consider whether rural Swazis have changed their behavior regarding food handling and washing, personal hygiene, proper handling and storage of water, etc.

By the end of the project it is hoped that the bilharzia laboratory and the Health Education Unit of the MOH will be staffed with trained personnel and equipped and functioning effectively. The Rural Water Supply Board will have developed the capacity to ensure that health criteria are an integral part of the design of any rural water supply project. It is hoped that by combining this effort with (1) health education to explain to people the benefits of changing their water and sanitation habits, and (2) a latrine construction program which will complement and reinforce health education about the relationship between disease and contaminated water, the Rural Water-Borne Disease Control Project will achieve its goal.

#### IMPLEMENTATION EXPERIENCE

No progress reports are available yet. All of the long term technical assistants except one are in the country, and project activities are beginning.

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### Interviews:

Alan Kulakow, Project Director, Academy for Education Development.

Joy Riggs-Perla, Africa Bureau, AID.

Fall 1980

**TANZANIA**

**IDENTIFICATION**

Project Name and Number:	Hanang Ujamaa Village Public Health Program, Number 621-0138
Location:	Hanang District
Project Dates:	FY 1977 - November 1981
Funding Level and Source:	Grant: \$499,000
Responsible Offices:	Health Officer, USAID/Tanzania  Bureau for Africa, Office of East Africa Affairs, AID/Washington
Principal Contractors:	CODEL (New York City); Development Associates, Inc. (data collection system)
Implementing Agencies:	CODEL/Tanzania

## COUNTRY STATISTICS

Total Population: 18.6 million

Rural Population: 88%

Infant Mortality Rate: 125

Population Growth Rate: 3.1%

Life Expectancy at Birth: 51

GNP Per Capita: \$230

Adult Literacy Rate: 66%

## SYNOPSIS

This model primary health care project focuses on the selection and training of two village health workers for each village without an already established health care facility in the Hanang District of Tanzania. The trained village health workers utilize first aid boxes to give simple treatments, refer cases to the already established health system, coordinate the collection of health information in the village, train village health leaders (health educators), and initiate health activities focused on preventive health measures. A management information system has helped monitor project progress since a 1977 baseline survey. The project began its training activities in January 1978 with the first trained VHWS posted to villages in October 1978, and expects to send the last trainees to their villages in November 1981.

## BACKGROUND

The United Republic of Tanzania's approach to meeting the health needs of its population must be considered in the light of constraints imposed by its lack of financial resources and manpower. Tanzania is one of the 25 countries with the lowest per capita gross national product in the world. Also, the country emerged from colonialism with a minimal health infrastructure upon which to build.

Tanzania has a land mass of approximately 1 million square kilometers. Much of the country is dry; large areas are covered by scrub and grassland, except in the region surrounding Mount Kilimanjaro where rainfall is good. The people are agropastoral, with 88% of the sparse population living in rural areas. As in most developing countries, reliable statistics about disease patterns are not available.

Given the prevailing economic, social, and technological conditions, there was a clear need for a national will to bring about a change. This will was enunciated the 1967 Arusha Declaration, which forms the basis of Tanzania's current health policy. Health has to be viewed within the framework of this national socio-economic plan, which emphasizes rural development. The

Arusha Declaration calls for:

- Overall rural development.
- Government mobilization of all resources for eliminating poverty, ignorance, and disease.
- Active participation by the government in forming and maintaining cooperative organizations.
- A contribution from the people (self-reliance) as an instrument for self-liberation and social development.
- People, land, good policies, and good leadership, as prerequisites of development.

It was decided to decentralize the planning machinery so that the people themselves could participate in the formulation of plans that would change their socioeconomic status. To this end, planning committees were established in each village, ward, and district, with the National Ministry of Economic Planning setting the broad outlines of national planning priorities and strategy. However, significant government efforts began only in 1972/73, when about 70% of the budget was devoted to rural development. International organizations and other donor agencies have played a part in implementing the government's objective of rural development, but "cooperation and not poisoned aid" remains the national theme.

The national socioeconomic plan aims at developing an integrated basic health infrastructure that will be acceptable and accessible to most of the population within Tanzania's social, economic, and cultural framework at the lowest possible cost. Other components of rural development to be given prominence include the provision of safe water and free primary education. Health services plans have been formulated at different levels and coordinated with national development plans, in which the promotion and restoration of the population's health are guiding principles.

In accordance with the Arusha Declaration, self-reliance was stressed. Local contributions in cash and kind were encouraged, giving the population an important role in the establishment of social services and necessary facilities. Mass mobilization was used to enhance the people's social consciousness as well as for health education.

To make it easier to provide essential social services, people in rural areas were encouraged to regroup in larger villages called Ujamaa villages. This regroupment tends to minimize the worst problems of planning for sparsely populated communities, thus achieving a wider coverage of essential services to the population. To make self-reliance a reality, village health posts and

and dispensaries are constructed by the villagers themselves, the government providing the necessary materials, equipment, and services not obtainable locally. The villagers also participate in constructing their water supply systems and are encouraged to build their own pit latrines and rubbish dumps.

Hanang District was formerly a subdivision of Mbulu District (to the north), but in 1970 it was designated a separate district. This new administrative unit is approximately 3,300 square miles in size with a population of about 200,000 people. The district lies within the Rift Valley with altitudes in general ranging from 3,500 to 5,000 feet, although Mt. Hanang rises to over 11,000 feet. It is generally a good farming area with adequate soil and sufficient rainfall during most years. Major crops are maize, beans, and wheat. There are also extensive livestock holdings.

In general, roads are very poor and travel is slow and uncertain, particularly in the rainy season. The district is divided into divisions, divisions into wards, with several villages in each ward. Villages are further divided into ten house groupings.

The largest medical facility in the district is the Dareda Mission Hospital which has recently become the Designated District Hospital. In addition to this major facility, there are three health centers and 22 dispensaries, of which 15 are government, five are operated by voluntary agencies, and two are parastatal owned. Health in the district is no better or worse than in most areas of Tanzania. Even though in most years the food crops are adequate, malnutrition (kwashiorkor and marasmus) is prevalent, particularly among children.

Tuberculosis is widespread and sleeping sickness (treated at the Maqugu Health Center) is found in the district. Leprosy appears to be declining. Other prevalent diseases include malaria, measles, schistosomiasis, gastroenteritis, infestations of hookworm and ascaris, pneumonia, and acute rheumatic fever with or without carditis in adolescents. At the present time, there is little public health or preventive medicine work being done in the district, although there is an under five clinic held at Dareda Designated District Hospital. To remedy this situation, the Hanang project emphasizes (1) nutrition, (2) health education, and (3) inoculations of children.

#### PROJECT DESCRIPTION

The Hanang District Health Project has been designed to contribute to the national health development effort by providing a model primary health care system for delivering integrated services to the villages. The development of health manpower training methods and of a management information system are expected to strengthen national capability to implement larger projects. The project involves villagers and their local leaders in cooperative

undertakings to improve their health and environment, particularly through preventive measures. Thus, the project focuses on responsible decision-making by villagers and implementation of resulting health related activities. Through activities carried out by villagers, the project aims to reduce the incidence of infectious and other preventable diseases such as tuberculosis, malnutrition, measles, bilharzia, eye diseases, and parasitic diseases. Village health workers are being trained to provide family planning information and services, collect health data, provide health education, and address food, water supply, and sanitation problems. The project works towards its objectives through the following methods:

#### I. Training Village Health Workers and Health Leaders

One male and one female worker are selected from each village. As part of their training, these individuals carry out a baseline survey in each village to identify problems perceived by the villagers. These surveys, conducted thus far in approximately 60 villages, point to contaminated water as a major source of illness, especially in children under 10.

Once trained, village health workers, (VHWs) return to their villages to train others. There are 80 villages in the project from which 169 VHWs are being trained. To date, 94 persons have been trained, and 45 are currently in training. VHWs are supported financially by their villages during the 10 month training period in Babuti, the district capital.

Many health workers, although originally expected to be volunteers, receive financial and other incentives from their communities. It was found that humanitarian gratification, and the Ujamaa obligation were not enough to compensate for significant amounts of time without remuneration. Although the government had originally felt that a health system based on village volunteerism was risk-laden, it appears that about half the VHWs presently receive some form of remuneration directly from their communities.

Training village health leaders (health educators) is taking place in each participating village. Candidates were elected by the villagers. Their village training enables them to serve under the supervision of the village health worker at the health unit level. Their role is to carry out health education activities in village households. This worker is called a health communicator or promoter in other projects. This aspect of the project has experienced the most problems to date. VHL attendance of their classes has been poor, and their follow-up teaching in the villages has been sporadic.

## II. Baseline Data Collection and Analysis System

A subcontractor (Development Associates, Inc.) has designed an elaborate health services information system. This system permits project managers to monitor disease incidence, service utilization, nutrition status, environmental improvements, birth and death registration, etc.

This information can be compared to the baseline survey, which covered vital statistics, nutrition, environmental sanitation, health services, and health status.

Village health workers and leaders are trained to collect data using forms developed by the contractor. The system permits the project to identify and monitor the nutritional status of children up to 10 years of age. Data analysis is then fed back to village leaders and health committees and to district health personnel for action. Data collected are transferred to magnetic tape for automatic data processing by the Development Associates, Inc.

## III. Health Delivery System

Each village is to have a health unit equipped with a first aid box. This box is established and replenished at the village's expense. However, due to fiscal constraints only 15 villages have been able to purchase first aid boxes.

MCH clinics have been established in 12 villages. The staff comes from nearby health facilities. Lack of manpower and limited transport have prevented the opening of more clinics.



## IMPLEMENTATION EXPERIENCE

The following chart summarizes the project's status.

### CURRENT PROJECT STATUS

#### OUTPUT I -- Training

	<u>Target</u>	<u>Current</u>
1. Village health workers	169	94
2. Village health leaders	48	43

#### OUTPUT II -- Data System

1. Baseline survey	Completed 1978
2. Management information systems designed and operational	Completed 1979
3. Training of health workers to collect data	Completed 1979
4. Distribution of information	Routine

#### OUTPUT III -- Health Delivery System

1. Village health committee	80	58
2. MCH clinic established	12	12
3. First aid boxes	80	15
4. Health education classes and demonstrations in villages		Sporadic
5. Construction of:		
Latrines		No informa-
Garbage pits		tion
Water protection		

External evaluations done in 1979 and 1980 noted the project's progress and recommended extending support through 1981. Nonetheless, they also identified a number of problem areas, including dependency on external personnel, the data system, community participation, and the VHW training program.

Due to the lack of training for management personnel and the complicated nature of the data systems, the project remains very dependent on outside technical assistance. The contractor (CODEL) works with the Ministry of Health in planning and implementing the project. The project director, a CODEL employee, assumes full management responsibility. The district health officer is the titular local project director. However, his role is unclear. Since there is no health planning/management training program for Tanzanian counterparts, it is questionable whether the project will continue without expatriate direction.

The 1979 evaluation reports that the data system is providing good information but that it is so sophisticated that long-term expatriate technical support will be required to keep it in operation. The evaluation notes that lack of resources and transportation also make it doubtful that all present data collection will be carried on when the project terminates.

It has been very difficult to measure the project's health impact, because it is nearly impossible to separate health effects brought about by the project from those brought about by external factors. The 1980 evaluation reports that in the coming year it will be possible through the data collection system to note changes in some health indicators, because baseline data has now been collected, and comparisons can be made. Data on childhood diseases and children's nutritional status will be of special interest.

The effectiveness of involving village leadership in the early stages of the project has been limited, and many of the leaders selected to be trained as health educators have discontinued their participation. The 1980 evaluation states that, in part because some leaders felt that health was not a high priority issue, only 17% of the leaders regularly attend their own training classes, and only 14% of the health units have village leaders who carry out their health education functions in their communities. However, as the project staff have become more proficient at identifying the political structure of villages, they have selected better candidates for health leader positions, and they have also been better able to involve residents in project activities. Also, the Paulo Freire methods being used to train the leaders were found to be ineffective. Therefore, the project is experimenting with other methods. Some of the health education classes are now being held in conjunction with adult education classes, which has proven effective and has led to higher attendance.

The VHW training program has required considerable revision in order to meet the challenge of transferring technical and conceptual knowledge to illiterate village residents. Training of village health workers was lengthened from two months to ten months. The accountability of VHWs to their villages has been well accepted and village committee secretaries have been named to monitor the VHWs' work.

Although the project staff has devoted unusual efforts to supervision and community work, the results are not yet satisfactory. According to the 1980 PES, 48 out of 80 targeted villages have been initiated into the project and 43 villages are considered active in participating in project activities. In each of the 5 villages where project activities have come to a standstill, it was reported that problems with village leadership, not specifically related to the project, caused the cessation of activities. Every 2 months a staff member spends a full week in each village to give continuing education and moral support to the VHWs, and to reinvigorate village committee activities that have slacked off. District health officials also visit the villages, and it is expected that these visits should help familiarize MOH personnel with the project and facilitate takeover. However, it is feared that the site visits cannot be maintained at the same level once external funding ends, due to the lack of both personnel and fuel.

The requirement that villages establish and maintain a first aid box has caused problems. Many villages apparently have not been able to raise funds due either to lack of income or lack of interest. The continuing maintenance and management of the health unit will require strong community leadership and MOH technical support. Lack of adequate financial support is also hampering project supervisory efforts. The high cost of transportation is reducing the use of project vehicles.

Much of the project's success depends on the staff's ability to encourage maximum community participation. The current approach—i.e. using VHWs as community organizers—may answer the need for committed leadership. The fact that each village has both a male and a female VHW should encourage all residents to be active in this primary health care scheme. If the community participation aspect of the project can be made to work as well as the delivery of health care services, this project could serve as a model for the entire country. Thus far, however, it has been difficult to learn how to train community residents to take leadership roles in health for their communities.

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### Interviews:

Rev. Boyd Lowry (by phone), Director of CODEL.

Sister Margaret Rogers (by phone), CODEL, April 1981.

**TANZANIA**

**IDENTIFICATION**

Project Name and Number:	Tanzania School Health Program, Number 621-0150
Location:	Dodoma and Singida Regions (and nationwide)
Project Dates:	FY 1980 - FY 1983
Funding Level and Source:	USAID: \$5.7 million
Responsible Offices:	Health Officer, USAID/Tanzania  Bureau for Africa, Office of East Africa Affairs, AID/Washington
Principal Contractor:	John Snow Public Health Group, Inc.
Implementing Agencies:	School of Health Officers of Dodoma and Singida Regions, Tanzania Ministry of Health (MOH)

## COUNTRY STATISTICS

Total Population: 18.6 million

Rural Population: 88%

Infant Mortality Rate: 125

Population Growth Rate: 3.1%

Life Expectancy at Birth: 51

GNP Per Capita: \$230

Adult Literacy Rate: 66%

## SYNOPSIS

Starting in 1981, eighty Tanzanian schools in Dodoma and Singida regions are establishing a standardized program of health instruction, health services, and nutrition and environmental improvements. Teachers and students will provide primary health care services to their communities. Schools will receive support for the construction of improved water systems, latrines, and improved school farm storage and production. If successful, project activities in these areas may be copied in other regions of the country. A revised health syllabus for the primary schools will be produced and distributed nationwide to every primary school in Tanzania and all newly trained primary school teachers will receive training in the utilization of this syllabus through the National College of Education.

## BACKGROUND

The United Republic of Tanzania has a land mass of approximately 1 million square kilometers. Much of the country is dry; large areas are covered by scrub and grassland, except in the region surrounding Mount Kilimanjaro where rainfall is good. Tanzania has very limited financial resources and manpower. It is one of the 25 lowest per capita income countries in the world. Tanzania's health infrastructure at independence was minimal.

Given the prevailing economic, social, and technological situation in the country, a concerted national effort was needed to bring about change. The determination to effect such improvements was enunciated in the 1967 Arusha Declaration. The Declaration includes a national socioeconomic plan that emphasizes rural development, community participation, and self-reliance. The statement resolved that "from now on the vital needs for water, schools and health shall be given priority in all expenditures."

In keeping with the development philosophy of the Arusha Declaration, the planning machinery has been decentralized so that the people themselves can participate. Planning committees have been established at each village, ward, and district level, with the National Ministry of Economic Planning setting the broad outlines of national planning priorities and strategies. However,

significant government efforts began only in 1972/73, when about 70% of the budget was devoted to rural development. International organizations and other donor agencies have played a part in implementing the government's rural development objective. Nevertheless, "cooperation and not poisoned aid" remains the national theme.

The national socioeconomic plan aims at developing an integrated basic health infrastructure that will be acceptable and accessible within Tanzania's social, economic, and cultural framework. Emphasis is also given to the provision of safe water and free primary education for all. To make it easier to provide essential social services, people in rural areas were encouraged to regroup in larger villages called Ujamaa villages. Local populations have been given an important role in establishing social services and facilities. Village health posts and dispensaries are constructed by the villagers themselves, with the government providing necessary materials, equipment, and technical help. Villagers also participate in constructing their water supply systems and are encouraged to build their own pit latrines and rubbish dumps.

The Tanzania School Health Program was preceded by an AID supported program to develop infrastructure for rural health services. The program supported the construction of village dispensaries and rural health centers, and provided for the training of paramedical personnel—over 1,000 aides were trained for dispensary work.

Other donors supported training of physicians, nurses, medical assistants, and rural medical aides; dispensary construction; installation of water and sanitary systems; communicable disease control; and immunization programs.

### School Health Program

In 1977, the Ministry of Health asked USAID to collaborate in the development of a National School Health Program to address the needs of school age children. Since then, the Ministry of Education has succeeded in enrolling 65% of the primary school age children in the program — about 3 million pupils. It was thought that this primary school system could provide the infrastructure necessary to deliver health services economically to this population. The present Tanzania School Health Project is designed to provide the services necessary to meet this objective.

### PROJECT DESCRIPTION

The Tanzania School Health Program provides health education, preventive and curative health care, nutrition and environmental improvements within primary schools. Each of these project components is discussed in detail below:

## I. Health Instruction

The project has been designed to introduce health topics during the two 40 minute class periods per week devoted to "domestic science." The capability of primary school teachers to present health topics will be strengthened by:

- Review and revision of the health portion of the domestic science syllabus and teachers guide.
- Provision of inservice training on teaching methodology, using the revised health syllabus, to "school health coordinators"—one teacher from each of 800 schools in two regions of Tanzania.
- Revision of the curriculum and training of trainers for the provision of educational programs on health-for-all for teaching students at the National Colleges of Education.

## II. Health Services

One teacher from each of the 800 primary schools will be trained as a "health coordinator." These newly trained teachers will be expected to provide the following services:

- Observation and screening (health check-up) for gross health defects;
- Referral and follow-up of students needing special care;
- First aid and maintenance of school health kits; and
- Maintenance of school health cards (immunizations, illnesses, screening information, etc.) and collection of cumulative school health information for transmittal to government health and education officers.

This training will result in the provision of elementary preventive services to primary school children. By acquiring health skills the teachers will be in a better position to establish working relations with local health personnel and to develop a greater awareness of health among their students.

The teacher's guide and the modified curriculum for the National Colleges of Education will reflect this emphasis on the teacher as a provider of preventive health services to school age children.

The teacher will be responsible for maintaining a cumulative health record card to be forwarded to the Ministry of Health. The information will be used:



- To record the health status of school children during the school year, including data such as: (1) immunization records; (2) incidence of illnesses; (3) absences for health reasons; and (4) referrals to dispensaries and treatments received.
- To correlate the above data with the advent of activities such as: (1) latrine construction; (2) water system provision; (3) school garden development; and (4) increased health instruction.
- To aid the government in identifying the health situation in the schools and in planning the continued development of the School Health Program.

### III. Healthful Environment

The project's approach to creating a healthful environment is to provide relevant learning experiences in the classroom, school grounds, and community. Instruction will emphasize the use of appropriate technology for water supply and waste disposal.

Early in project implementation, 80 schools are to be chosen to receive comprehensive project services, including the provision or improvement of school water supply, construction of latrines, and improved production and storage of produce from the school farms, as discussed below.

- Safe Water. Each selected school will have an evaluation of its water supply. Those requiring improvement will be assisted by community and project resources. It is anticipated that school health committees will arrange volunteer labor. Technical assistance for water provision (i.e. wells, rainwater storage, pumps, etc.) will be provided by project consultants. In all, a maximum of 80 systems will be assisted.
- Waste Disposal. Ventilated improved pit (VIP) latrines will be built at 80 schools. Latrine construction will be carried out simultaneously with water system construction.

### IV. Food and Nutrition

School farms will be upgraded to provide sufficient crops to feed the school population. Ministry of Agriculture extension agents will collaborate with schools, coordinated by the School Health Officers.

Two contract technicians, one a school health education expert and one a sanitarian, have been provided by the project for technical advice in the above areas and for general project management. They arrived in Tanzania in the fall of 1980, when project activities began.

### IMPLEMENTATION EXPERIENCE

This project uniquely ties health, education, agriculture, water supply and environmental sanitation to the community base. The focus on school children should provide a cadre of Tanzanian junior citizens with the tools to improve the lives of their families and communities.

The project staff arrived in Tanzania in the fall of 1980 to initiate activities. It is too early, therefore, to evaluate activities at this time.

### CURRENT PROJECT STATUS

#### OUTPUT I — Health Instruction

	<u>Targeted by 1982</u>	<u>Completed by 1980</u>
1. Review of domestic sciences syllabus and teachers guide, eight sections.	8	0
2. Inservice training for teachers.	800	0
3. Modification of teacher college curriculum. Revision of curriculum and guidelines.	1	1
4. Training of tutors for health training in components of teaching training.	10	0

#### OUTPUT II — Health Services

1. Training teachers to provide health care.	800	0
2. Collection of health data from each school.	800	0

#### OUTPUT III — Healthful Environment

1. Safe water system at each school.	80 (1980)	0
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2. Waste disposal VIP - ventilated improved pit latrine at each school.	80	0
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OUTPUT IV -- Food and Nutrition

1. Establishing school farms.	80	0
2. Training of school health officers and school health coordinators.	80	0

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**ZAIRE**

**IDENTIFICATION**

Project Name and Number:	Health Systems Development, Number 660-0057
Location:	Kinshasa, Kongolo and Maluku
Project Dates:	1978 - 1980
Funding Level and Source:	USAID Grant: \$675,000  Government of Zaire (GOZ): \$440,000
Responsible Offices:	Health Officer, USAID/Zaire  Africa Bureau, Office of Central Africa Affairs, AID/Washington
Principal Contractor:	Planning and Human Systems, Inc.,
Implementing Agencies:	Department of Health

## COUNTRY STATISTICS

Total Population: 29.3 million

Rural Population: 66%

Infant Mortality Rate: 160

Population Growth Rate: 2.8%

Life Expectancy at Birth: 46

GNP Per Capita: \$210

Adult Literacy Rate: 15%

## SYNOPSIS

Zaire's Department of Health (DOH) has been ineffective in reaching the rural population due to lack of human and financial resources and insufficient planning, management, and support capacity. This project was designed to improve the DOH's planning and implementation capability through training a key group of high-level personnel and implementing pilot projects in two rural areas.

The final evaluation found that this goal was not achieved, though some useful work was done. The contract terminated as scheduled. The project may be continued in a different form.

## BACKGROUND

Most of Zaire's rural population suffer from chronically poor health; they are victims of numerous severe endemic diseases, complicated by malnutrition and parasites. Data from a Kinshasa hospital indicates an average of 2.7 diseases per person per year. Infant and child deaths account for 80% of total annual deaths.

During their period of colonial rule, the Belgians established an extensive health network but made virtually no provision for its continuation by Zairian personnel; during the economic and political problems which followed independence, the system collapsed. GOZ efforts to revive it have not yet been successful: health manpower is scarce and extremely maldistributed, training is inadequate, and government health services are severely hampered by poor administration and ineffective logistics. A C% study undertaken in the Kinshasa area revealed that only 19% of the poor (who comprise over half the total population) had access to medical facilities.

In November, 1973, President Mobutu cited health as a priority for development planning. A plan for health services was drawn up emphasizing basic health care services to be delivered via a number of rural and urban development zones and integration of "desired birth services" (family planning for health reasons, not population control) into the health care system. A National Health Council composed of the heads of all health agencies, the education

ministry, and the university medical faculty was created in 1974 to serve as a national health planning and implementing body.

AID's project was designed during this period (1975) to help the GOZ implement its new health policy by improving planning and managerial capabilities. It was intended to complement a project on endemic disease control and lead into the Basic Family Health project, which would expand the activities developed under the subject project through an ambitious system of health development zones. (The Basic Family Health project has since been extensively revised; a much-reduced version is still in the planning stage.)

However, a severe decline in Zaire's economic position since 1974 has resulted in elimination of health as a priority and heavy cuts in the health budget. The National Health Council is apparently not operative. Currently, the GOZ relies heavily on missionary groups to provide rural health care because of its personnel, organizational, and budgetary constraints.

### PROJECT DESCRIPTION

The project's purpose was to strengthen GOZ institutional capacity to deliver health services.

Planned outputs were as follows:

- A unit established in the GOZ Department of Health (DOH) capable of planning and executing a system of integrated health services, with a training cadre in place.
- Written national plans for major support systems in logistics and supply (including maintenance), transportation (including maintenance); medical records and health data collection and analysis; manpower development and utilization; budgeting and fiscal accounting.
- An initial integrated health delivery system operating in Kongoilo and plan of action, operating procedures, and essential commodities ready to begin implementation of an integrated delivery system in a second zone.
- A study to determine the requirements for a schistosomiasis control project.

These outputs were to be achieved through: (1) technical assistance provided by the contractor (supplemented by a USAID-contracted coordinator in Kongoilo and an assistant to the contractor Chief of Party, to compensate for lack of resources in the contract); (2) commodities for the two pilot zones; and (3) a schistosomiasis expert. The Peace Corps also provided volunteers to work with the project in the two zones.

The technical assistance approach was redesigned in February 1979, on the basis of data gathered during the project's first six months. Activities included a three-phased training program for the National Health Planning Group, a group of about 10 high level DOH civil servants. Training consisted of a series of weekly workshops in Kinshasa to analyze the status of the Zairian health system, a three-week U.S. study tour for on-site observation of relevant management methods and processes, and another series of weekly Kinshasa workshops to adapt the principles learned to the situation in Zaire. Eight short-term consultants in various technical areas, together with the contractor's resident Chief of Party (COP) as project director, conducted the workshops. Although 24 person-months of short-term assistance were planned, only about 10 were provided.

Concurrently, model projects were to have been developed in the Kongolo and Maluku areas. AID assigned a coordinator in Kongolo, and seven Peace Corps Volunteers (PCVs) are working in community organization, formation of local health planning committees, and development of preventive health services at the Kongolo hospital. Two PCVs are working in Maluku. PCVs have established MCH clinics, initiated regular inoculation campaigns, provided health education and family planning counseling, trained Maluku promoters in nutrition and health education, and cooperated with GOZ personnel in providing clean water and latrines. Both the AID coordinator and the PCVs have received guidance from the contractor project director. Though much delayed, initial medical supplies and equipment have been provided in the two field zones under the AID grant.

A study to determine the requirements for a schistosomiasis control project is to be carried out by a short-term consultant. This study has been added recently (May 1980) to the project outputs, and additional funding has been authorized though not obligated. No further information is available in Washington at this time concerning other aspects of this study.

### IMPLEMENTATION EXPERIENCE

The following chart summarizes the project status as of mid-1980.



CURRENT PROJECT STATUS

<u>OUTPUTS</u>	<u>STATUS</u>
1. Planning and implementing unit established in DOH.	1. Group trained in planning and coordination.
2. Written plans for support systems: logistics, transportation, information, manpower, budgeting and accounting.	2. Transportation plan done. Only consultant reports for others. Some restructuring being done and necessary legislation prepared.
3. Integrated health delivery system in Kongolo; elements ready for implementation of system in second zone.	3. Not achieved. PCVs are providing services in Kongolo and Maluku.
4. Study to determine requirements for schistosomiasis control.	4. Funds authorized but not yet obligated. No other information available.

The contractor, Planning and Human Systems, Inc., had chief responsibility for technical assistance to the project, as well as overall coordination. Other responsibilities were less clear, some being shared with USAID/Zaire. Authority over non-contractor project personnel hired by USAID/Zaire was not clear and caused problems which will be discussed later. The contractor was responsible for the first three outputs listed, but not for the schistosomiasis study.

This project was approved in 1975/76, but contractor selection and contract negotiations took almost three years. The contractor's COP arrived in Zaire in October 1978. A six-month delay then occurred because of lack of cooperation from the GOZ. According to the contractor, this was due to GOZ dissatisfaction with the project design. The Minister of Health objected to training directed to the National Health Council, which is outside the bureaucracy. Besides considering such training ineffective, the Minister viewed it as infringing on the DOH's territory. The Minister also felt that training additional professionals in the U.S. would constitute a waste of resources, as there was already a

large group of U.S. trained individuals who were not properly utilized. When the design was changed to train a key group within the DOH, the Minister immediately gave his support, as well as office space, facilities, and counterpart funds. However, because of unrelated logistical problems, a currency change, and banking rulings, the project was without counterpart funds for approximately 12 months.

Numerous other problems have arisen as a result of the unrealistic and poorly worked out project design\* that led to misunderstandings concerning priorities and responsibilities. The number of full-time resident contractor personnel originally proposed was reduced by the AID/Washington contracts office from three to one, although no corresponding changes were made in the scope of work. Extreme transportation and logistical difficulties were encountered in trying to develop a pilot project in Kongolo—1,100 miles from Kinshasa in the North Shaba region. Neither USAID nor the contractor foresaw the difficulties involved, and no contingency allowances were included in the contract. The Kongolo area was originally selected because USAID had a large agricultural project there and was interested in providing social services as well, thereby moving toward an integrated rural development approach.

Conflict between the Mission and the contractor arose over the contractor's efforts to change the site to a more accessible area near Kinshasa. Although the difficulties of working in Kongolo became apparent to everyone, the Mission felt that the contractor was renegeing on the original agreement, and the contractor felt that the Mission was insisting on Kongolo in order to support a higher priority (the agricultural project) at the expense of an effective health project.

Because there was no clear agreement on what was to be accomplished or how it was to be done, a definite lack of rapport and cooperation between USAID and the contractor severely affected project implementation.

According to AID/Washington sources, a key lesson learned was that the DOH is probably not capable of carrying out a project in an area as isolated as Kongolo; in hindsight, it is felt that the pilot effort should have been in a more accessible area. But according to AID, difficulties and conflict might also have been avoided if a more flexible approach had been taken by the contractor, such as requesting a time extension because of the logistical problems involved rather than insisting on changing the site.

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\*Design problems are discussed extensively in the 1980 AID Project Evaluation Summary (PES).

Because of the problems mentioned, the COP concentrated his efforts on the Kinshasa training program for the DOH group rather than on developing an integrated health system in Kongolo. The contractor's April, 1980 Status Report indicates that the Kinshasa training has been effective in preparing the DOH group in health planning. The report states that the group is now actively engaged in planning the health system, coordinating the efforts of all DOH directorates, and seeking necessary changes in legislation: (1) to permit user fees in order to develop a self-supporting system; (2) to improve pharmaceutical distribution and control; and (3) to institute a national health insurance program. Both the Mission and AID/Washington agree that the workshops have been useful. However, the project evaluation (PES) questions the substitution of a three-week training tour for long-term training in health planning and management, and notes that total training was reduced from the 63 person-months envisioned in the project paper to 7.5 person-months. The evaluators, however, were unable to make a judgment on the DOH team's level of expertise after their training.

The PES also indicates that national plans for logistics, information, manpower, and budgeting/accounting were not prepared as planned. What was produced was a series of consultant reports on these general areas. Furthermore, the DOH officials, apparently unaware that they were supposed to prepare these national plans, appeared satisfied with the consultant reports. (In the area of transportation, it is possible that a plan for a central garage will be implemented.)

As noted earlier, however, the effort in Kongolo to establish a health delivery system has encountered serious problems. The contractor complained that the COP had responsibility for the project without having any legal authority over the USAID-contracted coordinator in Kongolo or the PCVs. While the COP maintained regular radio contact, his instructions apparently were not always followed, and extreme transportation difficulties prevented frequent supervisory visits. AID recognized the lack of legal authority, but stated that the contractor had functional, de facto authority. AID's feeling (as reported by AID/Washington sources) seemed to be that the contractor was too rigid in attempting to disclaim responsibility because of lack of legal authority and was not making the necessary adjustments to work effectively with the Mission and the PCVs.

According to the contractor, the coordinator (whose contract was also permitted to expire in August, 1980) did not perform effectively and both she and the PCVs were undertaking activities which were not related to immediate project objectives as understood by the contractor, i.e., training local health personnel for the integrated health system being developed by the Kinshasa planning group. Kongolo and Maluku were supposed to be demonstrations of the group's work. However, according to the contractor, an apparent desire by USAID/Zaire for more rapid implementation—especially in Kongolo as support for the agriculture

project—led to direct delivery of services by the PCVs, instead of the training of local personnel and formation of linkages between health providers. Some training was provided to local DOH personnel and private hospital staff by the contractor's short-term consultants, but the contractor felt that there was no effective linkage between them and the Peace Corps activities. In the contractor's opinion, the DOH group is only now ready to implement a health system based on realistic planning.

The PES judged the Kongolo intervention somewhat differently, crediting PCV services with success in demonstrating that rural villages can address immediate health problems with locally available and affordable resources, thereby leading some GOZ officials to feel that health can be improved without an increase in expenditures. The PES recognized, however, that the project did not create a functioning rural health delivery system.

The general conclusions of the PES were that the project failed to accomplish its purpose of strengthening GOZ capabilities in health planning and management, though it did at least partially succeed in training a cadre of DOH planners/managers. Other outputs were not achieved as planned. The PES attributed this failure to poor project design, citing numerous failures to comply with established AID design procedures, which in turn led to misunderstandings, disagreements, and poor interpersonal relations between the parties. The PES also indicated that external circumstances—economic decline, lack of priority for health, and communication and transportation difficulties—contributed to the project's problems.

The PES recommended that the contract with Planning and Human Systems be allowed to expire as scheduled; that the Kongolo coordinator's contract also be allowed to expire; that AID continue to assist Peace Corps activities in Kongolo; that AID provide short-term consultants to the DOH on request; and that the project be extended through August 1982 using remaining project funds. Changes in personnel and activities were recommended as well as additional commodities support.

When the contractor's involvement ended as scheduled in August, 1980, the firm proposed, with the support of the DOH, to extend the contract to permit continued technical assistance to the DOH group. This request was not accepted by the Mission.

There remain differences in contractor and PES conclusions about the success of the project. The contractor has emphasized the success of the DOH training program. On the other hand, the PES recognized that a group had been trained, but expressed reservations as to thoroughness of training; the PES also attributed greater success to the Kongolo PCV effort than the contractor did. Both, however, agree on the problems caused by lack of clarity in project design and the consequent lack of agreement on strategies and responsibilities.

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Dr. Frances Georgette, President, Planning and Human Systems, Inc., Washington, D.C. August 29, 1980.

Laurence Bond, Project Division Chief, AFR/DR/CAWARAP, AID/Washington, September 4, 1980.

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**AID - Assisted  
PRIMARY HEALTH CARE  
PROJECTS:  
Summary Reviews**

**Near East**



**American Public Health Association  
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**1981**

PART IV  
AID ASSISTED PRIMARY HEALTH CARE PROJECTS IN  
THE NEAR EAST

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**AFGHANISTAN**

**IDENTIFICATION**

Project Name and Number: Basic Health Services Project, Number 306-0144

Location: 4 health regions (of a total 6)

Project Dates: (Phase I) 1976 - June 1979  
(Phase II) (Never executed) 1978-80

Funding Level and Sources: USAID: Phase I: \$4,248,000 (grant);  
Government of Afghanistan (GOA): \$1,837,000;  
Other donors: \$345,000;  
USAID: Phase II: \$13,984,000

Responsible Offices: Health Officer, USAID/Afghanistan  
  
Bureau for Near East; Office of Technical Support; Health, Population and Nutrition; AID/Washington

Principal Contractors: Management Sciences for Health(MSE);  
University of California at Santa Cruz (auxiliary nurse midwife training school)

Implementing Agency: Ministry of Public Health

**COUNTRY STATISTICS**

Total Population: 15.9 million

Rural Population: 85%                      Infant Mortality Rate: 226  
Population Growth Rate: 2.7%              Life Expectancy at Birth: 42  
GNP Per Capita: \$240                      Adult Literacy Rate: 12%



## SYNOPSIS

The Basic Health Services Project was designed to provide health services to the 80% of the rural population without access to modern medical care. The project had two major components: the improvement of services offered through rural health centers, and experimentation with alternative village-level health delivery systems to reach those beyond the effective range of the health centers. Village health workers, similar to "barefoot doctors," were introduced as part of the program, and traditional midwives (dais) were trained to provide village-level care for women and children.

The project was terminated before implementation of the second phase because of the civil unrest following the takeover of the Soviet-backed government in 1979. Although a final evaluation of the first phase of the project was not possible, it appears that the village-level health delivery system was successful. The health workers and dais were well accepted and proved effective in dealing with common medical problems. Services at the health centers were improved by focusing attention on such management areas as logistics, information systems, personnel, and training. Nevertheless, after nearly six years of efforts to strengthen these areas, their lack of development remained the most serious obstacles to improving rural health care.

## BACKGROUND

Afghanistan is a mountainous, land-locked country with an unusually rugged physical environment. The topographic conditions have led to physical isolation of the population and hampered the development of internal transportation routes. An estimated 85% of the population lives in small, isolated and widely scattered villages. The nomadic population is also substantial—about 2 million people.

By most international measures, Afghanistan is among 25 of the least developed nations, and shares the problems of these less developed countries. The health situation is poor. Recent national surveys indicate birth rates as high as 50/1000 and death rates of over 30/1000 in some rural areas of the country. Rural deaths occur at about twice the urban rate, particularly for women and children.

The most conservative estimates of maternal mortality (64-300 per thousand) are 100 times the level encountered in the United States and Sweden. Infant mortality rates in rural areas approach 200 per thousand, and deaths of children 1-5 are similarly elevated. Childhood mortality—caused principally by diarrheal disease, other infectious and respiratory diseases, measles, and nutritional deficiencies—accounts for approximately 60% of all deaths.

Afghanistan's existing health services—urban centered and curatively oriented—are far from adequate for so dispersed a population. Because of the inadequacy of transport, only a small percentage of the rural population has access to the towns and cities where modern health services are available. The nomads, whose migration routes take them far from settlements for most of the year, rarely if ever come into contact with the health services. At the time the Basic Health Services project began, only about 5% of the rural population had access to a Basic Health Center—the most peripheral level of health facility. Indigenous practitioners such as shopkeepers and mullahs, therefore, provide the majority of care outside the family. Women, because of Muslim tradition, are especially deprived of modern medical care. They can neither make the necessary journey to obtain services in the towns, nor can they be examined by a male, or even receive medical care from one except through an intermediary.

Since the 1960s, the concept of Basic Health Centers (BHCs) has become well established in the Ministry of Public Health (MOPH) in accord with the recommended policy guidelines of WHO and UNICEF. And, for a number of years the MOPH has been expanding its network of BHCs to provide services to the large rural population. This effort, however, has been seriously hampered by a number of factors including very limited financial resources, limited management capacity to implement rural health activities, and a lack of female auxiliary personnel essential to reaching the female population.

The MOPH's long range plan was to establish a BHC in each of the country's 197 districts. However, even after this network of rural health centers is completed, an estimated 80% of the rural population would still lack convenient access to modern health care. Poor roads, great distances, and long periods of isolation during the winter greatly limit the number of people who can be covered by each center. On the other hand, financial and other considerations strictly limit the number of BHCs that can be operated. A predecessor project of the Basic Health Services Project focused on improving the functioning and coverage of the BHCs. The Population and Family Planning Project (1973-76) was premised on the development of the BHC as the means of delivering MCH as well as contraceptive and family planning services. As part of this project, AID provided assistance to strengthen the MOPH's management capacity for supporting rural health services. The population project also included a subproject providing assistance to the Auxiliary Nurse Midwife (ANM) Training School for training female paramedical personnel.

Prior to the Basic Health Services project, AID also supported a BHC pilot project in Parwan/Kapisa Province to test ways of improving the effectiveness and efficiency of BHCs. This model program, together with the experience from the family plan-

ning project, provided a basis for the design of Phase I of this project.

### PROJECT DESCRIPTION

The Basic Health Services Project was designed to assist the MOPH in expanding primary health care in rural areas. The project had two major components: the provision of services through BHCs, and the design of alternative and complementary health delivery systems to reach those beyond the effective range of the BHCs. The project, then, was to experiment with different methods of providing health services, using the BHC as the cornerstone of the system.

It was planned that the project would have a second phase in which the most promising village-level health delivery system would be expanded and further tested in an area large enough to encompass one-third of the population. However, Phase II was never executed, due to the Soviet takeover of Afghanistan and the subsequent closing of the AID mission.

For the first phase, the project purposes were to:

- Provide basic health services, with emphasis on services for women and children, to 830,000 persons living in 50 minor civil divisions within four of Afghanistan's six health regions; and
- Provide two or more alternative health delivery systems which, when widely replicated, would provide minimal health services for those persons without reasonable access to a BHC.

The project's design and specific goals and activities were quite flexible in order to allow for shifting political circumstances and opportunities. The Basic Health Services component of the project was designed to put together the management system, trained personnel, and facilities necessary to provide health services. The planned outputs included: establishing a regionalized supervisory and support operation to backstop the BHCs within the project; constructing and putting into operation 50 BHCs; training and assigning BHC field staff; putting into operation a client record system; extending the BHC supply system; and expanding and improving the auxiliary nurse midwife (ANM) school founded in 1972.

The planned outputs for the alternative health delivery system component of the project were deliberately left very general to provide the necessary latitude for experimentation—testing an approach, dropping it if warranted, and proceeding in a different direction. In the project paper, two health delivery systems models were proposed: the Volunteer Village Health Worker (VHW)

Model and the Community Entrepreneur Model. In both models, frontline workers were to be trained to provide simple diagnosis and treatment of common health problems, as well as to undertake health education functions. As the VHW program was beginning, however, it became clear that the program, as proposed, would not be effective in improving the vital area of maternal and child health. As a result, the training of traditional midwives was undertaken as an experiment in reaching women and children with preventive and curative care.

Management Sciences for Health (MSH) was chosen to provide technical assistance to the project and to assist the MOPH with the implementation of various components. MSH had assisted the MOPH in developing its management capability under the 1973-76 Family Planning Project and had developed good working relations with the ministry. The MSH technical advisors had offices in the MOPH, and worked on a routine and daily basis with their counterparts. Because of the small number of specialized personnel in the ministry, the management team was asked to provide advisory services in a number of areas unrelated to the project. In order to continue this general assistance to the MOPH, the contract with MSH specified that roughly 10% of their time be spent working on special problems, as directed by the ministry.

With the exception of the construction/renovation of 50 BECs, AID's contribution to the Basic Health Services Project consisted primarily of technical assistance in the form of advisors, and support of training programs. The major project activities are discussed below.

#### Provision of Physical Facilities

As part of the plan to provide basic health services in 4 regions of the country, the project partially financed (75%) the construction of 50 basic health centers. When it was possible, facilities were rented to provide temporary quarters during the two or more years it took to complete construction. In the four regions comprising the project area, the MOPH determined that 50 new BECs were required to complete the network of these most distant health outposts. The construction of health facilities, according to the Management Science for Health final report, was reputed to be "the price that had to be paid" to get the government to agree to the rural health delivery program. The construction progressed slowly and was characterized by cost overruns and unacceptable construction standards. This caused a great deal of friction between AID and the MOPH and even had negative carry-over to the other aspects of the project.

Each center is typically staffed by a physician and two paramedical personnel, usually including an assistant laboratory technician, vaccinators, or a nurse. Only about one-fourth of the centers also have a female auxiliary nurse-midwife.

## Training of Personnel

The project had a number of training components, including overseas and third-country training of specialists in public health, management and health planning, and the inservice training of health personnel to staff the BHCs in the project areas. Assistance to the ANM School took place under a separate AID sub-project implemented by the University of California/Santa Cruz; this school provided trained female health workers for the BHCs.

One of the major project activities was to develop a master plan for training health personnel in the country. Although a coherent manpower development plan was never implemented, the project did make progress in the form of analysis, planning, and training activities. Job descriptions and operational manuals were prepared for the BHC staff after a study of the centers and analyses of personnel jobs. The project also assisted in the development and implementation of a mobile team training program. Training activities included training-of-trainers courses, preservice orientation for new physicians, and continuing education courses in technical areas.

The strategy for upgrading the skills and knowledge of the BHC staff, as well as their ability to administer health services, was developed based on the experience of the Parwan-Kapisa Pilot Project. The primary interventions were operations manuals, frequent inservice education, and regular supervision. Each operations manual consisted of two sections: one presenting technical information about appropriate medical and public health activities for common problems, and the other dealing with management procedures for the BHC activities. Manuals were developed for the BHC doctor, female worker, male nurse, sanitarian, and clerk. A system was devised using a simple color code whereby patients would be screened by one of the staff and then routed to the appropriate personnel.

Frequent continuing education was provided to the BHC personnel by a mobile training unit. This team consisted of a doctor, nurse, nurse-midwife and sanitarian who had received special training to undertake their training duties. During the first year of the project, a centrally managed mobile training/supervisory team approach was used. The training teams, based in Kabul, travelled to BHCs on a planned schedule for 5-day inservice workshops using the operations manuals and other training materials. At a later date they scheduled follow-up supervisory and evaluation visits to assess changes in performance and to conduct other necessary training.

By early 1977 it became obvious that the MOPH did not have the management skills to handle the logistics and scheduling of a centrally managed, mobile training/supervisory team. Also, an evaluation of the training teams undertaken in February 1977

showed great variation in their abilities to communicate information. The evaluation showed that the training visits helped the BHC workers to use the operations manuals, but the teams were not always effective in improving BHC skills during their one 5-day visit. The evaluation also showed that the mobile teams were able to make only 1.25 supervisory visits to only 60% of the BHCs during the course of a year, and that 40% were not visited at all.

As a result of this evaluation, a decentralized regional approach to training was adopted in early 1977. The use of regional centers represented a shift in strategy to one based on preservice training of all workers, formal inservice training at an attached BHC for each worker in the region on a twice yearly basis, supplemented by mobile supervisory visits and a mobile training visit to those BHCs in critical need of improvement. Four regional training centers were planned, although only one was opened during the life of the project. The concept of regional centers was adopted not only to facilitate access to the BHCs on a more regular basis, but to counter the problem of personnel transfer among the BHCs. The problem was that once an entire BHC staff had been trained in a 5-day course, transfers would quickly result in a mixture of trained and untrained staff. The concept of a "trained BHC" simply proved invalid. The strategy of offering each category of worker two courses per year in addition to preservice orientation seemed more realistic.

The one training center put in operation during the course of the project—in the Girishk region—gave seven courses per year, ranging in length from two to five weeks. The center consisted of a formal training team, a mobile training team, and a mobile supervisory team. The regional center also was able to make at least one supervisory visit per year to the BHCs in the area. Visits to the BHCs in the region consequently tripled.

### Building a Supply Management Capability

The project paper states that the objective of this project component was to develop a smoothly functioning system that would ensure a continuous supply of basic drugs, contraceptives, supplies, and training materials at all BHCs. The problems were considerable and typical of developing countries; i.e., drugs and medicines were allocated quarterly (and sometimes not every quarter); decisions on allocations were made at the center—a "push" system—with little or nothing known about inventory levels or needs at the provincial and BHC levels; wrecked, delayed, or non-existent delivery trucks were common; the drug formulary had not been examined critically for years, with the result that the system was burdened by greater numbers of items than appropriate at the BHC level.

During the preceding Parwan pilot project, the Management Sciences for Health team assisted the MOPH study the commodities

systems down to the BHC level and test elements in the system. The team also examined the drug schedule and revised it, reducing greatly the number of items and generally substituting generic nomenclature drugs for brand name ones.

In this project, supply management and logistics were considered of the highest importance because a "rural health system which runs out of drugs and supplies quickly runs out of patients, since drugs are what villagers are primarily interested in." (MSH report introduction) The Parwan-Kapisa pilot project had shown that clinic utilization tripled when an adequate supply of drugs was made available. The supply management and logistics system was designed to avoid complex systems. An example of a simple system was the "two bin" system used for contraceptive supplies. The BHCs maintained two bins, each holding a three month supply. When the first bin was empty, an order form would be filled; and needs would be met out of the second bin while awaiting the new supplies.

### Development of a BHC Information System

One of the project components was the development of an information system for the BHC and village-level health network. According to the project paper, the purpose of the system was to:

- 1) build individual client health histories in order that subsequent health personnel might serve individuals more effectively;
- 2) develop over time the data required to construct a health "profile" of the people in different geographic areas;
- 3) provide a basis for evaluating BHCs and the individuals staffing them; and
- 4) provide a basis for health research at various political levels.

The project worked on a wide variety of information systems, from the extremely simple home visit reporting system for use by illiterate trained dais, to comprehensive information systems designed as the core of logistics management. These included information systems for the warehouse mobile training team, basic health centers, personnel management, financial management, village health workers, dai training program, drug procurement, and others.

The philosophy was to keep information gathering simple, and to develop innovative methods for use by largely illiterate village-level workers. The emphasis was on the development of a management information system useful to managers and administrators, rather than on the development of data.

Training in the collection, analysis, and use of data was given to all levels of personnel--from village-level health workers to the MOPH managers for whom the data were intended. Information systems was incorporated as a subject area in the manuals for BHC health personnel, and was included in the training program.

## Support of the Auxiliary Nurse-Midwife Training School

In partial response to MSH findings of the necessity for fielding more female health workers, a sub-project of the Basic Health Services project provided ongoing support of the ANM Training School founded in 1972. This sub-project was administered separately by the University of California/Santa Cruz. UCSC's role in the expansion and improvement of ANM services was to increase the quality of recruitment and instruction at the ANM school in Kabul. This was accomplished by training the entire staff of the school, revising the curriculum, devising a recruitment procedure, and initiating a method for graduate follow-up. As of May 1979, there were 203 graduates and 140 students. Approximately one third of the graduates were working in BHCs.

## Development of a Village-Level Health Care Delivery System

While the above discussed activities were being undertaken to improve the services provided through the BHCs, alternative and complementary delivery systems were also being explored. As mentioned earlier, the BHCs—even if increased in number and improved in quality—could not provide easily accessible primary health care to the 80% of the population living in remote villages. After studying many alternative plans for extending health services beyond the BHC, the MOPH decided upon two major approaches:

- to train existing indigenous midwives (dais) at the village level; and
- to have villagers choose someone from among themselves to be trained as a village health worker (VHW).

The two approaches—dais and VHWs—were not viewed as mutually exclusive; rather it was anticipated that the traditional midwife and VHW would work as a team to provide services to the community. As a team they could deal effectively with the most important village health problems. And, as a male/female team they could effectively reach women as well as males with needed health services, thus for the first time giving rural women access to modern medical care. The VHWs—most of whom were male because of the literacy selection requirement—would provide simple curative care with their stock of prepackaged drugs, and assist the village with preventive measures such as improving drinking water. The trained dai, in addition to attending home deliveries, was to provide health education and MCH services, and refer women requiring simple drug therapy to the VHW.

## Development of the VHW Program

The MSH team worked with the MOPH in developing the VHW program, experimenting with such questions as: selection process, minimum qualifications, training requirements, supervision mechanisms, and the supply of drugs. The VHW program began in May



1977. By late 1978, about 140 VHWs had been trained, and plans were made to train up to 10,000 more by 1985.

Selection: Early in the project, it was decided that VHWs would be selected by their villages. There was a good deal of discussion as to the minimum qualifications to establish for this class of health personnel. Training traditional healers was considered potentially less of a threat to the established medical community than the creation of new health providers, although ultimately it was decided to allow villagers to choose anyone they wished. In the selection guidelines presented to the villages, the major qualifications were that candidates be literate and able to spend at least 4 hours per day as a VHW. VHWs were also to live 10 or more kilometers from a basic health center and be accepted by all major factions of the village.

The profile of all those actually selected to serve their villages as health workers provides some insight into the importance the community placed on training these people. The 137 VHWs trained during the life of the project fell into three groups.

One group consisted of young, literate, under-employed men who were sons or nephews of members of the village committee. A typical member of this group might be a 24-year-old son of a prominent malek. The malek had three older sons to work his land, but there was not enough land to support his youngest son as well. This youngest son was then selected to be a VHW, thereby gaining some prestige and a small income for this part-time job. The second group of VHWs included Mullahs and shopkeepers, who were usually literate, respected in the village. The third group consisted of literate men who had been indigenous practitioners of some sort, most often as injectionists, herbalists, or bone-setters.\*

From the data on occupations it would appear that over 60% fall into category I, 20% into category II, and 1% into category III, with the remainder falling outside the three general groupings.

The key feature of VHW recruitment was the creation of "village committees." These committees, consisting of 3 to 5 persons, chosen by the villagers themselves, had the responsibility of selecting the VHW for their village, supporting their work--in part by providing a "clinic" room--and making sure that they performed honestly and competently. The MOPH established a

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\*Implementing a National Rural Health System: Management Experiences from Afghanistan. MSH. pp. 60-61.

special VHW Recruitment Team to help set up these committees.

The method of establishing these committees was adapted to the political reality of Afghan villages. They are not "democratic" in the Western sense, and although decisions are made by consensus, it is the powerful landlords who dictate how they are made. In selecting the members of the health committees, therefore, the approach used was first to select the most important man in the village. He then would call together the other important members of the community, who then would decide on the membership. Usually the same men who informally made decisions for the village were the ones selected.

According to the final report,

Although the VHW Recruitment Teams made every effort to convince the Village Committees to take their new responsibility seriously, this in fact rarely turned out to be the case. The Village Committee members were invariably polite and agreed to anything that the Recruitment Teams suggested. However, when the village was subsequently visited by the VHW supervisor (after the VHW had begun working in the village), the Village Committee in most cases had not done what it had promised to do. It seems clear that although the Village Committees were usually well-meaning and supportive (even enthusiastic) about their VHWs, they were rarely willing to take concrete steps, which required time and money, because of a belief that if they didn't do it perhaps the government would.

Training: After the completion of extensive surveys to determine health needs and priorities at the village level, it was decided that the VHWs should be trained to recognize and treat a few common diseases as well as to provide health education. More than 50% of training hours were devoted to preventive concepts and services. The fundamental principle underlying the training of VHWs was that a short, practical training course could transmit the simple skills needed to lower morbidity and mortality rates. The 3-week training course was conducted in the BHC in the district where the health workers lived. The VHWs stayed either at the BHC or with relatives. They were trained by a Kabul-based team of trained trainers. Continuing education courses were planned to be given every 6 months at the BHC.

The training curriculum was divided into the following areas: maternal and child health; family planning; environmental sanitation; personal hygiene; nutrition; introduction to the human body and germ theory of disease; first aid; curative medical care; immunization; and organization of the VHW's job. Principles and techniques of health education and of working with community leaders (such as the village committee) were

stressed throughout the course.

Supervision and Supply: The support of VHWS through supervision and drug supply proved to be difficult to maintain. The BHC sanitarian was to visit the village-level health worker once a month; however, because of difficult field conditions and the lack of financial incentives, supervision was inadequate. Supervision by the village health committee also did not happen as planned, and the final report notes that the involvement of this group is probably essential for the health workers to survive.

VHWS were supplied with an initial 3-month stock of the 16 basic drugs they were authorized to dispense. For resupply they went to the nearest BHC to purchase additional packets. The sale of drugs was an innovative aspect of the project; previously all drugs dispensed through government programs were provided free of cost.

Financial Support: The VHW program was designed to be self-supporting. The health workers were not employed by the government, and were not paid a salary. They were part-time workers, but were able to make a small income by selling drugs. The workers were authorized to sell prepackaged drugs for a small profit (\$0.05 per packet) as well as to allow the village committees to decide upon any other means of financial support. This provided an average monthly income of roughly U.S. \$5.

After the first few months, however, most of the VHWS voiced numerous complaints about not receiving a regular government salary. Experience indicated that VHWS spent about 4-6 hours per day providing health services. And, although a government salary was never contemplated, many of the VHWS continued to hope for one. Although none of the village health committees provided financial support for their health workers, the MOPH hoped that this might eventually occur.

#### Development of the Traditional Midwife Training Program

The dai, or untrained traditional birth attendant, is well established in the Afghan culture, and performs a very high percentage of deliveries. The program's intention to link dais with the village-level health care system proved very effective. The midwives are self-supporting, as they charge a fee for deliveries, and are well respected. The plan was to upgrade their technical skills in midwifery and train them in the provision of primary medical care for children under five years of age. It was anticipated that adding a new range of activities to their traditional ones would allow them to provide effective medical care to both women and children—the two groups that had been virtually without access to medical services. The dais were not authorized to dispense drugs, as the MOPH and other officials felt strongly that illiterate women (the dais are largely illit-

erate) could not be given this responsibility. Patients (women and children) requiring drug therapy, therefore, had to be referred to the male VHW. What kind of cultural problems this arrangement posed is not discussed in the project documents.

Securing and Training Personnel: The midwife training program was initiated on a national level, which created the need to train an estimated 15,000 dais. The MPH planned to train 3,500 dais during the first five years of the program. After several teams of trainers had been trained, the MOPH decided that the instructors should be twelfth grade graduate women as well as previously trained dais. A nurse-midwife supervised each course. The dai curriculum was based on the concept that learning is most effective and long lasting if it closely resembles what the student will later be expected to do. It therefore was considered critical that, under supervision, the dais learn by examining and treating women and children. The 5-week training courses focused on upgrading technical skills, creating a basic understanding of maternal and child health problems, and developing an understanding of the principles of health education.

The Management Science for Health team found it quite difficult to keep the course practical. Once away from Kabul, many of the trainers reverted to lectures and didactic training with which they were most familiar. Also, because of traditional sex roles, the trainers (women) were reluctant to arrange for the dais to work in the BHCs as this involved making arrangements with the male physicians who administer the centers.

Although the evaluation team was not able to observe the dais in the field because of civil unrest, the training courses were not expected to totally alter the way dais practice midwifery. How much was retained and for how long remains an open question. Preliminary reports, however, indicated that the trained dais were carrying out duties other than traditional midwifery. A review of their patient records showed that 40% of their patients were children, indicating that their new duties and areas of training were being put to use.

Home visits: Another experiment of the Basic Health Services Project was in the use of the trained dai as a home visiting agent. The visiting was directed at finding sick and malnourished children and pregnant women. The dais also provided some health education and made referrals to the BHC. One feature of the experiment was the use of pictorial record systems that illiterate dais could use to maintain patient records. The results indicated that dais could collect accurate information and that they could be supervised by BHCs.

Supervision: This issue was not discussed in the project documentation available for the preparation of this report.

## IMPLEMENTATION EXPERIENCE

### FINAL PROJECT STATUS

<u>OUTPUTS</u>	<u>STATUS</u>
1. Four operational regional Health Centers (BHC) and alternative health delivery systems (AHDS).	1. One operational, June 1979.
2. 50 operational BHCs.	2. 43 constructed.
3. ANM school operating at optimal level (an estimated 140 ANMs will complete training by the end of the project).	3. 203 graduates and 140 students as of May 1979.
4. BHC personnel trained and assigned.	4. No information.
5. BHC supply system operating.	
6. Two or more alternative health delivery systems designed and approved for testing.	6. Village health worker program approved by Afghan cabinet, April 1977; National dai training program initiated in fall of 1977.
7. Elements of one or more alternative health delivery systems demonstrated effective and financially and administratively feasible.	

The project was suspended in June of 1979, several months after the takeover of a Soviet-backed government. Upon assuming power, the pro-Soviet government radically changed the MOPH's philosophy and approach to primary health care. According to Management Sciences for Health's final report:

The new pro-Soviet government that took power in Kabul in April, 1978 decided to eliminate the VPW program for political rather than technical reasons. New advisors urged the Ministry to stop training workers similar to the Chinese "Barefoot Doctors". They argued that health workers similar to the Soviet "feldshers" should be

trained instead. Despite the fact that "feldshers" were inappropriate for providing health care to Afghan villagers (since they came from the city, were not chosen by the villagers, and were based in fixed health facilities located at a great distance from many villages), the MOPH decided to accept the Soviet advice.\*

Although information is sketchy about the current status of other components of the Basic Health Services program, it appears that the Auxiliary Nurse Midwife Training School in Kabul continues to function, and that dais are still being trained.

Despite its premature termination, during its nearly three and one half years of operation, the project evidently had made considerable improvements in the BHC system and had established promising experiments with village health workers and dais. Information about the effectiveness and potential impact of the program is available from four sources: 1) the evaluation conducted in October 1977, after 1 year of operation; 2) the Health Sector Strategy and Assessment conducted in March 1978 to help finalize the design of the project's planned second phase; 3) the studies conducted during the course of the project to judge the effectiveness of various interventions; and 4) the contractor's final report which was prepared in lieu of a final evaluation. This report focuses on the successes and failures of the program, and provides a substantial body of recommendations regarding the provision of primary health care in developing countries.

A great deal of effort was expended to improve the performance of the BHCs by focusing attention on the area of personnel, training, logistics, record keeping, information use, and supervision. During the six-year\*\* course of technical assistance the MOPH moved from a state of unawareness about many of these management areas to a point of being able to carry out some of them in a rudimentary way. The shift in attention given to management within the ministry can be gauged from the increase of Basic Health Services management and training personnel from one in 1973 to fifty in 1979.

Nevertheless, wide-ranging weaknesses in management capability continued to hamper the development of the health delivery system throughout the project. The final report prepared by Management Sciences for Health notes that "in countries such as Afghanistan, where there is a critical shortage of trained

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\*Implementing a National Rural Health System: Management Experiences from Afghanistan. MSH. p.49.

\*\*6 years including the management assistance to the predecessor Family Planning Project.

administrators and managers, new support systems development, and improvement of existing systems may be expected to require from five to ten years from initial introduction of the concept until the operational system reaches a level of steady-state operations.\*\* This is a time-consuming process, yet an essential one if BHCs are to function properly and if new village-level programs are to be supported. Following, then, is a review of the impact of the major project activities undertaken to improve basic health services:

#### Manpower Planning/Training

Despite project efforts in the area, the MOH's manpower development program continued to be largely uncoordinated, unplanned, and accorded low priority. There was no focus or needs analysis for planning and implementing manpower development programs. Recruitment was ignored, and there were many vacant positions in the BHCs, especially for female workers. The training itself was problematical, although technically feasible. By the end of the project, effective training programs had been developed and successfully implemented for every class of trainer and worker. The project did encounter difficulty in training higher level MOPH personnel outside the country because of their lack of proficiency in English. (They were to be sent to the U.S.A.) Candidates were simply not available for in-country language training for long enough periods before their departure as they could not be spared from their work. As a result, established language proficiency standards usually had to be waived. The evaluation reports that because of this process, the candidates undoubtedly missed many potential benefits of their training. The evaluation report stressed the need to explore third and in-country training opportunities, since the training would be more appropriate, and English might not be required.

To deal with the problems of staff turnover and absenteeism, especially high in rural areas, the project attempted to develop clear personnel policies and to institute a system of incentives. Free living quarters as an incentive for rural work were established, and higher pay was authorized for hardship posts. However, an incentive system keyed to performance was never accepted, as it was simply too removed from traditional operating procedures where family and political connections are of foremost importance, and seniority rather than performance is the basis for promotion.

\* Implementing a National Rural Health System: Management Experiences from Afghanistan. MSH. p.122.

## Information System

Two years after the project began, the Health Sector Strategy and Assessment report notes that the MOPH was operating in a relative vacuum of information. Health data collected from surveys or from health centers and hospitals were rarely used by Ministry officials in making technical decisions. Political, personality, and family factors proved far more important in determining what decisions were made. The final report prepared by Management Sciences for Health also notes that far more data were collected than were ever used.

Information systems were a continued component of the project and were of interest to the Management Sciences for Health technical advisory team. However, though considerable effort was placed in the development and simplification of routine health services reporting systems, and annual workplanning procedures, none of them "took." According to the final report, Ministry managers were not accustomed to relying on such information and decisions were more often made on impressionistic and interpersonal grounds. (p. 41) This report further notes that, "While information systems have important roles to play in rural health services development, priority for their development should be based on potential use, which may well differ from what the outside view might expect." (p.41)

## Logistics

Although the technical assistance team worked for six years in the area of logistics, it was not until the fourth year (1977) that the MOPH began to take concrete steps toward establishing a coordinated logistical system. Some parts of the supply management and logistics system were more quickly adopted and routinized than others. The central warehouse system, for example, was operating well by the time the project was terminated, and the system developed for ordering and supplying drugs was substantially improved.

The BHCs had twice yearly shipments, whereas in 1973 they usually had one shipment every two years. The time required to distribute drugs and supplies to all BHCs was reduced by 50%. Drug supply was improved through standardizing and reducing the drug list; establishing more effective procurement and storage; and utilization competitive procurement, generic nomenclature, and the procedures of the new central warehouse. However, by 1974, the MOPH had not developed the capacity to vary annual requirements by health center, nor to handle requests for additional supplies. Active health centers still ran out of drugs. The MSH final report concludes that, "Shortages and imbalances remain very real, and logistics support more clearly emerged as the major constraint on the current state of BHC performance." (p. 30) Lack of adequate supplies not only decreases user confidence, but also hurts staff morale by hindering the health workers' ability



to carry out the curative tasks for which they have been trained.

The substantial budgetary savings realized through the use of generic drugs allowed the MOPH to increase the amount of drugs given to the BHCs. Another innovation which proved highly effective was the packaging of drugs in unit-of-treatment form. This resulted in less waste and more standardized drug therapy, and facilitated the dispersal of drugs to village-level health workers.

### The Alternative Health Delivery Systems

Both trained dais and village health workers had been very well accepted by Afghan villagers. For the first time, villagers had access to a person trained in "modern" medicine, with a supply of drugs, and within a 10-minute walk. The VHWS themselves responded enthusiastically to the new program as well. In the village, their new status gave them respect and prestige.

The dais, nearly all of whom are over forty and illiterate, demonstrated an ability to upgrade their basic knowledge and skills related to maternal and child health. Villages without trained dais were anxious to have them and exerted political pressure to have local dais included in training programs.

VHWS saw an average of 80-100 persons a month. They resupplied themselves with drugs, and demonstrated good judgement in the use of drugs. The VHWS showed high levels of learning and retention on repeated testing. Unfortunately, the VHW program was suspended before it could confirm the hopes for sustained village loyalty and support (including crucial financial support).

Although both programs appeared to be successful, detailed evaluations were not possible because of civil disorder in the country. Available data, however, have enabled a number of general observations (quoted from the MSH report) to be made about the two projects.

- Because of the high level of enthusiasm and support for trained health workers at the village level, recruitment and selection of motivated villagers has not proven to be a difficult task.
- Highly specific training curricula with behavioral objectives are necessary for the effective "training-of-trainers," and for potential outcomes for short, intensive training courses.
- Logistical supply and supervision of village workers are far more difficult to organize and manage than are

- recruitment and training. Incentives (financial and otherwise) need to be carefully built into the supervisory and supply process.
- By allowing the villagers and village committees to have final say regarding who their VHW or trained dai should be, it is possible to minimize village factional infighting from weakening the effectiveness of the chosen workers in the village.
- For the village workers themselves, it is difficult to provide incentives so that they will concentrate primarily on health education and preventive activities rather than curative care.

In addition, initial experience with the VHW and dai programs indicated that the Government of Afghanistan is capable of financing the cost of initiating and maintaining the program. As the programs were planned, neither of the village-level worker categories was salaried. The yearly cost of the VHW program was estimated at \$0.41 per patient visit: \$0.19 borne by the patient (cost of drugs), plus \$0.22 borne by the government (cost of training, start-up costs, supervision, program management costs, and overhead costs). The cost to the patient for receiving care from a VHW compared very favorably with that for receiving care from any other non-government health source. For example, seeking care from a pharmacist involved not only the cost of transportation but also the purchase of drugs—non-generic and with a substantially higher mark-up than that authorized for the VHW. Such a visit to a pharmacist has been estimated to cost approximately \$6.20, nearly 30 times the cost of a VHW patient visit. Whether villagers perceived the two services as comparable in quality was not answered during the short duration of the programs.

#### Problems with the VHW Program

The major problems with the VHW program were its emphasis on curative care and the lack of sufficient financial incentives. The evaluation report noted that although the program was designed to deliver both curative and preventive services, there was a strong possibility that the curative components would be provided at the expense of the preventive. This occurred, in fact, during the few years the program was in operation. The prevailing demand among the rural population is for curative health services. In addition the VHWs were financially rewarded (in the form of profits from drug sales) only for curative services. Although 50% of training time was devoted to preventive services, the only incentive for providing them was the motivation of VHWs through training and supervision. This situation continued to pose problems throughout the life of the project.

The question of financial incentives for the VHW was another issue that was never resolved. The program was designed on the basis of unsalaried VHWs, yet most of them expected that the government would eventually make the position a paid one. The village health committees were encouraged to provide some form of small stipend to the VHW by levying a fee on each family. None of the committees, however, took such action as they also felt that a government salary was necessary and probably forthcoming. The program was terminated before an appropriate financing mechanism was established.

The use of generic drugs packaged in plain wrappers also was a problem for VHWs, as these drugs were perceived as inferior to the more elaborately and expensively packaged drugs dispensed by the pharmacies. The program did begin experimenting with different packaging; however, the program was terminated before this issue was resolved.

#### Problems With the Dai Program

On the whole, the dai program appeared to encounter considerably fewer difficulties than the VHW program. The dai was already an established figure in the community, and one that was already financially supported by the community on a fee-for-service basis. The major problem with the dai program was the difficulty of supervising them in the field so that they did not slip back into traditional midwifery practices after their training courses. Another important problem was that of referrals of problem cases and high-risk pregnant women to BHCs. For, although the dai was trained to identify these cases and refer them to the nearest center, the centers themselves were often ill-prepared to take care of these referrals. This reduced the effectiveness of the village-level workers as well as the credibility of the dai.

#### Conclusion

Although recent political events have terminated important aspects of the Basic Health Services project, the project nonetheless has had one of the longest lives of any national PHC campaign. It is hoped that experiences from this project, many of them well studied by MSH and others, may improve the planning and effectiveness of PHC programs in other countries.

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EGYPT

IDENTIFICATION

Project Name and Number: Strengthening Rural Health Delivery Systems, Number 263-0015

Location: Governorates (provinces) of Fayoum, Dakahleia, Assiut and Beheira

Project Dates: 1978 - 1983

Funding Level and Source: AID Grant: \$8.5 million  
Government of Egypt (GOE): \$3.1 million

Responsible Offices: Office of Health and Population, USAID/Cairo  
  
Bureau for Near East; Office of Technical Support; Health, Population and Nutrition; AID/Washington

Principal Contractor: Westinghouse Health Systems (host country contract)

Implementing Agency: Ministry of Health (MOH), Rural Health Services Division

## COUNTRY STATISTICS

Total Population: 42.1 million

Rural Population: 55%

Infant Mortality Rate: 90

Population Growth Rate: 2.7%

Life Expectancy at Birth: 54

GNP Per Capita: \$390

Adult Literacy Rate: 44%

## SYNOPSIS

Egypt's Ministry of Health, realizing the urgent need to make its rural health delivery system more effective, is making a major effort to eliminate the constraints hampering the system's operation. An effort is also being made to identify major health problems and test ways to reduce them. Varied health interventions are being tested in four representative areas. The project is now nearly halfway through its five year life. In spite of numerous delays and constraints, the project appears to be making substantial progress in revising administrative and service procedures and instituting effective community outreach.

## BACKGROUND

In spite of major governmental efforts to raise the standard of living, rural Egyptians continue to suffer from the problems common to developing countries: poverty, lack of education and poor health. Rural Egypt, however, also has a unique problem: because its habitable land is limited to a narrow strip along the Nile and the Delta, Egypt has an extremely high rural population density (about 2,700/square mile in the inhabited area). Villages of over 10,000 inhabitants covering only 10 square kilometers are common, and some villages reach a size of 20,000. Sanitary facilities, water supply, refuse disposal and housing in these villages are largely inadequate.

The most prevalent health problems are infectious diseases, and parasitic and gastrointestinal problems which often contribute to undernutrition among older babies and toddlers. Infant and child mortality rates are especially high in rural areas, around 130 to 150/1000. Almost half of preschool child deaths are caused by diarrheal disease\* (estimates made in the project area range between 60 and 70%).

This situation persists despite an unusually extensive health system: at the end of 1977, there were 2,282 rural health facilities (outpatient units, health centers with 10-20 beds and

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\*Source - Workshop on Nutrition and Health in Egypt, Office of Nutrition, AID/Washington, 1979, p.118.

rural hospitals), with an average unit/population ration of 1/9,049 and a unit/village ratio of 1/1.77. All villages are within 3 km of a health facility.\*

Egypt is unusual among developing countries in that all facilities have at least one physician and nurse, plus auxiliary and support personnel. Except for the doctor, personnel are usually from the area served. Volunteer community health workers have not been commonly used in Egypt.

All three levels of facilities (health units, health centers and rural hospitals) provide integrated basic health services, but differ in the complexity of care offered. Basic services include health education, MCH, school health, communicable and parasitic disease control, environmental sanitation and emergency and curative medical care. Each facility is responsible for reporting births and deaths in its jurisdiction. Services are free of charge, except for a few nominal fees.

Despite this substantial and accessible system, however, serious problems in health delivery are evident: low outreach; a general lack of preventive efforts (few if any preventive health checks for infants and toddlers, other than immunizations); lack of knowledge and skills appropriate to rural practice by both doctors and nurses; poor and infrequent supervision (partly due to transportation and communication problems); and an excessively time consuming record system.

At least part of the reason for the relatively poor performance of health personnel has been attributed to lack of incentives and motivation. The Egyptian system guarantees jobs to all university graduates. Education is free for all and enrollment has increased tremendously, far outstripping available facilities and faculty. This has resulted in low standards, lack of supervision and discipline and lack of practical training. Another reason for poor performance is the extreme primacy of the physician. Nurses command little respect and are not allowed to function fully. Nursing education also suffers from a lack of hands-on practice.

Factors in underutilization of existing services by the rural population include the wide cultural gap between doctor and client, the still strong reliance on traditional medicine, and popular skepticism about the effectiveness of government clinic services. It is estimated that only about 11% of the people see the MOH

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\*Egyptian Experience in Primary Health Care, Ministry of Health, Cairo, n.d., p.15.



doctor first--the majority first consult the pharmacist, family, traditional healers or private doctors. Most rural women (and a substantial number of urban women) still prefer traditional midwives (dayas).

As such problems were identified, it became clear that almost all aspects of Egypt's rural health service delivery system required strengthening. The current project was conceived for this purpose. Priority areas for cooperation included conducting a health sector analysis and carrying out a rural health pilot project.

The project agreement was signed in September 1976. According to the November 1977 PES, implementation was delayed for a variety of reasons, including changes in AID procedures for "host country contracting," delays in meeting the "conditions precedent," and insufficient mission staff. The MOH itself contracted Westinghouse as the prime contractor for this project. A technical assistance contract was approved in January 1978, and implementation began in April 1978.

#### PROJECT DESCRIPTION

The project's purpose is to assist the MOH in improving rural health by identifying and testing methods to reduce or eliminate major constraints to effective health service delivery and by identifying health problems and means to solve them.

Major outputs are summarized as follows:

- Provision and testing of logistic support systems: transportation, communications and equipment.
- Disease control and preventive health services designed, tested, and operating.
- Analysis and training systems established for primary health care orientation and skills; information gathering and processing; personnel management and motivation; evaluation.
- Community participation supportive of improved health services.

The project is being carried out in four governorates that are representative of the entire country (Fayoum and Assiut in Upper Egypt; and Dakahleia and Beheira in Lower Egypt). These governorates encompass nine districts with over two million people (about 10% of Egypt's rural population) and contain 227 health facilities (about 10% of the rural health system). The project began in April 1978 and is scheduled to terminate in five years.

Project activities are divided into several distinct phases: The preparatory phase (the first 3 months) was devoted to carrying out two pilot surveys to help identify problem areas and to preparing the implementation plan.

The next six months were used for conducting more extensive surveys of the health situation and delivery system. The project is now in the first of three implementation phases of 18 months each which sequentially introduce service innovations, improve and evaluate support facilities and carry out applied research on specific health problems.

During the first two years, transportation (vehicles and their necessary support systems) are being provided to all districts, but health services are only being implemented in one district in each governorate. The other districts in these governorates serve as controls, to enable assessment of the effects on health status of improved transportation singly and in combination with improved health services.

According to the plan, during implementation phase I, major efforts and activities are to be directed towards strengthening basic service programs, namely maternal and child health, health education, family planning, school health, and environmental health. Strengthening these programs is to be achieved through 1) reorganizing program activities; 2) establishing an active outreach through regular home visiting by the nursing staff; 3) progressively delegating diagnostic and treatment responsibilities for common and simple conditions (such as uncomplicated childhood diarrhea) to the nurse; and 4) establishing regular and supportive supervision for all members of the health team. In addition, professional skill and motivation are to be raised by instituting an inservice training program as well as an incentive system to foster team spirit and individual performance.

During the second implementation phase, services will be started in the other four districts. The project will also look in greater detail into the potential for utilizing community resources, e.g., the feasibility of extending health services through the use of dayas (traditional midwives), community health workers and/or neighborhood mothers as a link between the formal health service and the community. Development and implementation of a replicable communications system, expansion of the transport system, exploration of alternative systems for delivering services, as well as build-up of peripheral and central expertise through local and overseas training are also planned for this phase.

During the third implementation phase, a "pruned" system, incorporating experience from both earlier phases, will be tested for eventual national replication. In addition, training will start for staff from other districts and governorates.

The project is a large scale pilot effort to improve health services. It is not a research project. Specific studies that need to be undertaken during project operation hence are designed to test alternate means of service delivery in such areas as health system evaluation and manpower training and motivation. A system for project evaluation has been prepared which examines health service outcomes, outputs, quality of care, and individual worker performance.

IMPLEMENTATION EXPERIENCE

The following chart lists major project outputs and their status as of mid-1980.

OUTPUTS	STATUS
1. Support systems.	
a. Transportation.	a. Vehicles provided to all health centers and HQ (140 vehicles); all but 1 center utilizing vehicles.
b. Communications.	b. Still in planning stage; to be implemented in phase II.
c. Supply, equipment and maintenance.	c. Facility maintenance and drug supply system designed but not yet implemented. Commodity ordering system implemented. Most commodities received.
d. Administration and supervision.	d. Revised administrative system developed - in use in a minority of facilities. All supervisors trained and provided with checklists. Special supervisory "flying teams" established.
2. Health services.	
a. Phase I.	a. Revised MCH services and home visiting implemented in over half of facilities.

FP to be implemented soon. Second phase of health education in preparation (designing kits). Trainers identified for environmental health; health and inpatient programs not yet begun.

- b. Phase II.
  - c. Phase III.
3. Analysis and training systems.
- a. orientation and skills training.
    - a. 13 training sessions held:  
pre-implementation (3 days) for 578 physicians, nurses and sanitarians, lab techs. 170 supervisors trained. Data collectors trained. Overseas: long-term, 1 physician (of 5); short-term, 3 district health officers. Workshops and visits for project directors.
  - b. Information system.
    - b. New service records and logs developed and in use for MCH and FP supervision and administration. Others in preparation.
  - c. Personnel management.
    - c. Incentives studied and system developed (also see "supervisory systems").
  - d. Evaluation system.
    - d. Planned and partially implemented: Baseline survey, first facility survey and household survey completed. Supervisory feedback system implemented.
4. Community participation.
- b. Not yet begun.
  - c. Not yet begun.
  - 4. Activities identified; feasibility studies done.

Activities to begin in Phase II.

5. Studies of specific problems (applied research) (Eight proposed, L.O.P.)
5. Diarrheal disease control study completed. Study of personnel incentive system in progress.

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Sources: First and Second Annual Reports, SRHD Project, A.A. Keilmann, Westinghouse Health Systems advisor, May 1979, and May 1980.

The project now covers 120 health facilities in four districts, and will cover 241 by January 1981. According to the implementation plan, phase I should have been completed by mid-1980, so the project is somewhat behind schedule. However, considering the problems encountered (discussed later), the project has been judged by the contractor and AID personnel to be progressing rather well. The 1979 AID Project Evaluation Summary (PES) noted that to avoid delays in future projects a more realistic time frame should be allowed for contractor orientation and development of implementation plans, and that sufficient administrative and logistic support should be provided for contractors.

The project operates through the existing administrative framework of the Rural Health Services Division of the MOH, with MOH personnel carrying out project responsibilities directly related to their ongoing positions. The project's Director is an Undersecretary of State and Director of Endemic Disease Control; the Deputy Director is Director of Rural Health Services; and the full-time Executive Director is the former Director of Rural Health Units. The contractor's Chief of Party (COP) and Deputy COP serve as consultants to the project in close collaboration with the Executive Director. The project is represented in the governorates by Deputy Field Directors who are also the Directors General of Health Services in the governorates. The District Executive Directors are usually the District Medical Officers, and are responsible for implementing project policy. As a means of providing a degree of independent expertise, judgement, and outside peer group support for the project, a Technical Advisory Committee (TAC) of eminent U.S. and Egyptian physicians was created. This TAC has held two meetings, in August 1978 and September 1979.

The principal contractor is Westinghouse Health Systems (WHS), contracted by the GOE and chartered with providing technical assistance, which includes assistance with surveys, methodology, planning, implementation, testing and evaluation of all facets of the project. This assistance has been provided by two long-term resident advisors, the COP, and an adviser for management and training (who has now completed his 18-month assignment and left

Egypt), plus short-term consultants as needed (the implementation plan projected use of about 12 short-term consultants for a total of about 66 weeks; as of May 1980, there had been 18 consultancies, for a total of about 53 person/weeks).

The 1979 Project Evaluation Summary (PES) stated that the professional caliber of the COP was outstanding; and that he and the management and training planner had established good rapport with MOH officials. According to another source, the MOH has been reluctant to accept further long-term U.S. consultants but has had difficulty in identifying appropriate Egyptian staff and consultants.

Considering the structural constraints of Egypt's rural health delivery system, the project appears to be making good progress, according to all sources consulted. The current project status chart details output accomplishment.

According to the project's first annual report, major constraints during the project's first year were time, delays in obtaining equipment, poor quality of equipment received, and difficulty in recruiting suitable manpower. As the 1979 PES also noted, insufficient time was allowed for problem diagnosis and elaboration of training plans and materials, which had to be developed "from scratch." Equipment was delayed or unsuitable, because of insufficiently detailed specifications and poor planning --for example, 150 hand calculators were received for which batteries are not locally available; the slide projector obtained is not suitable for field conditions; vehicles are of two different makes, complicating repair and spare parts inventories.

During the second and third years, substantial progress has been made, and revised administrative and service procedures have been implemented.\* Implementation has been slow, however, because of continued deficiencies in health workers' knowledge and skills and the clinical orientation of physicians. But health teams in some facilities are starting to accept broader community health responsibilities, skills have increased, and team members are taking on new roles. An indicator of improved outreach is that before project implementation began, only 1 in 60 mothers was aware of oral rehydration therapy; after five months of implementation, 1 in 5 was aware of ORT (according to the Second Annual Report).

Nevertheless, the most important implementation constraint continues to be the performance of health workers, as well as a lack of qualified personnel for higher levels (which became evident when the project was trying to recruit trainers and an assistant to the Executive Director).

Commodities continue to cause problems--those ordered from abroad have frequently been delayed or lost, and even local procurement has been slow and difficult.

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\*Source: Second Annual Report, May 1980; interview with contractor COP, October 1980.

Overseas training of Egyptian personnel has also experienced problems: there are few applicants, and even fewer who are fully qualified. A major problem has been lack of sufficient ability in English. Because of delays in the selection and approval process, attrition has been a problem even among qualified potential trainees.

The project has instituted an incentive system to help increase output and dedication and compensate for low salaries. Monetary incentives are provided to the entire health team if all team members have achieved a specified percentage of expected output. Individual incentives can be earned by members of unsuccessful teams who perform individually at high levels. There are also non-monetary incentives, such as public recognition and the opportunity for additional training. Award of incentives is based on quarterly supervisory evaluations. The personnel incentive system has resulted in some increase in staff output, but has been beset by pressures for routinization which would make it meaningless. The contractor advisor emphasized the need for a good, tight supervisory system to make incentives work.

There have been two AID evaluations of the project (PESs of 1977 and 1979). Some of the major recommendations have already been noted. In brief, the 1977 PES, conducted prior to implementation, noted delays encountered and extended the project completion date; requested clarification of local currency accounting and of the relationships of MOH, USAID and the Technical Advisory Committee (TAC); and noted the benefits of host country contracting in increasing GOE involvement and commitment, even though it caused a delay in implementation.

The 1979 PES again extended the project completion date; recommended revisions in the project paper log frame and budget to fit the implementation plan (to be done after the technical evaluation now tentatively scheduled for January-February 1981). And, as noted previously, the PES recommended a more realistic time frame for implementation planning, and increased local staff support if necessary. The PES also recommended that a decision had to be taken on whether to continue the TAC, as the project seemed to be progressing smoothly despite the lack of significant TAC contributions. It was later determined that the TAC would continue, according to the AID/Washington project officer. In general, the PES corroborated the constraints and problems noted by the contractor's COP, and concurred in revising the project purpose to emphasize improving the health status of beneficiaries as well as improving services, noting that the design process should permit such flexibility. The PES also noted the need to determine whether local personnel are capable of maintaining and repairing the commodities ordered, and the need to provide accurate, detailed commodity specifications.

The "applied research" study on diarrheal disease control has become an important focus of the project. It is being carried out in 29 villages in 3 districts of the Dakahlela governorate, covering 23,800 children below age 5. Its objective is to find cost-effective means to reduce preschool child mortality by testing different types and methods of distributing oral rehydration salts, as well as investigating all child deaths in the area to determine causes and circumstances. Preliminary results indicate that in villages where Oralyte was made available through home distribution, mortality was less than half that in control villages. Home-prepared sugar-salt solutions and use of prepacked sucrose/salt mixture reduced mortality by over a third of that of control levels. However, Oralyte distributed through commercial outlets (shops and pharmacies) did little to reduce mortality, due to the outlets' failure to properly instruct mothers in its use.\*

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\*Source: "Second Progress Review Meeting on the Diarrheal Disease Control Study," S.R.H.D. Project, Mansoura, October 14, 1980.



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### Interviews:

Mostafa T. Hammamy, M.D., Deputy Director of SRHD project and Director General of Rural Health Services, MOH, Cairo (October, 1980).

A.A. Kielmann, M.D., Resident Advisor to SRHD project, Westinghouse Health Systems, Cairo (October, 1980).

Barbara Turner, Project Officer, Near East Bureau, Office of Technical Support; Health, Population and Nutrition; AID/Washington (several conversations in September, October, and November 1980).

**EGYPT**

IDENTIFICATION

Project Name and Number: Urban Health Delivery Systems, Number 263-0065

Location: 3 health zones in Greater Cairo: West and South Cairo, Helwan

Project Dates: 1979 - 1985

Funding Level and Source: AID Grant: \$25,272,000  
Government of Egypt (GOE): \$19,388,000

Responsible Offices: Health and Population Office, USAID/Cairo  
  
Bureau for Near East; Office of Technical Support; Health, Population and Nutrition; AID/Washington

Principal Contractor: Westinghouse Health Systems (technical assistance), ECTOR (health sector assessment), D.M.J.M. Kidde (architecture and engineering), Alemara (architecture and engineering). All are host country contracts.

Implementing Agency: Ministry of Health (MOH)

## COUNTRY STATISTICS

Total Population: 42.1 million

Rural Population: <u>55%</u>	Infant Mortality Rate: <u>90</u>
Population Growth Rate: <u>2.7%</u>	Life Expectancy at Birth: <u>54</u>
GNP Per Capita: <u>\$390</u>	Adult Literacy Rate: <u>44%</u>

## SYNOPSIS

Rapid population growth and high density have aggravated urban health problems in Egypt. In spite of extensive health infrastructure and personnel, urban health care needs are not being adequately met. The GOE has undertaken this project in three areas of Cairo as a demonstration, to be replicated if feasible. The purpose is to make the health delivery system more accessible and effective, through improvement in management, personnel performance, community education and outreach, logistical support, and facilities. Implementation has just begun.

## BACKGROUND

The Egyptian population suffers from health problems common to many developing countries: endemic diseases, parasitic and gastro-intestinal problems, and malnutrition, particularly among older babies and toddlers. Infant and child mortality rates are very high (about 6 times higher than rates for developed countries), though they are declining. Problems are complicated further by a high population growth rate and increasing migration to the cities, particularly Greater Cairo, which now is home to over 9 million people (about 21% of Egypt's population). Thus, urban density is extremely high (136,000/square kilometer in some parts of Cairo).

Unlike most developing countries, Egypt has developed an extensive network of government health facilities staffed by at least one physician and nurse, plus auxiliary and support personnel. (Community health workers have not been used; this project will introduce some volunteer workers and trained traditional midwives on an experimental basis).

There are some 75 hospital beds available for every 1,000 Egyptians and one doctor for every 2,000, both very high figures for developing countries. But in spite of the apparent availability of human and physical resources, substantial GOE investment in health activities (around 2% of GNP), and a policy of providing free health care for all, the system has not functioned to its full potential. Rapidly increasing demand for services has revealed constraints within the urban health delivery system. The result has been an inability to meet urban health needs.

Recent U.S. assistance to Egyptian health programs was begun in 1974 with the establishment of a U.S.-Egyptian Joint Working Group (JWG). In 1976 the JWG endorsed the concept of initiating a project to improve urban health services. On the basis of a preliminary survey of the health situation in Cairo, the current project was designed by the MOH with assistance from Egyptian and U.S. contractors and USAID personnel. The approach taken is consistent with the strategy of the Egyptian Five Year Health Plan which stresses prevention, planning, making services more readily available, and community participation in health care.

The project should benefit from the experience gained in related projects, such as the AID-supported Family Planning and Rural Health projects (see the previous project summary), and a similar World Bank project in Cairo dealing with MCH and family planning. The MOH will make comparisons and transfer experiences among projects.

#### PROJECT DESCRIPTION

The purpose of the Urban Health Delivery System Project (UHDSP) is to assist the GOE in making the existing urban health care delivery system more accessible and effective so that it better contributes to health improvement and can serve as a basis for replication in other urban areas. The major outputs are:

- A health sector assessment of the project area and Greater Cairo.
- Upgraded/renovated MCH clinics (10).
- Construction/renovation of general urban health centers (GUHCs) (14).
- Establishment of a Center for Social and Preventive Medicine (CSPM) as the central coordinating point for health and social aspects of MCH services, education, training, and research.
- Innovative neighborhood services in health education, basic sanitation, nutrition, family planning, and other preventive measures; community participation mechanisms identified and tested.
- Referral system of primary, intermediate, and tertiary services developed and tested.
- Training program for the personnel required for the project (1,500 trained).
- A system for procurement, supplies, and maintenance of facilities and equipment.

This project was planned as a demonstration effort, to be replicated if feasible. It covers three zones within Cairo governorate—Helwan, South and West Cairo—with a total estimated population of 1.7 million people, 66% of whom are low-income, with health problems representative of urban areas. The major target groups are women of childbearing age and children under 5 years. It is estimated that approximately 625,000 people in the project area fall in these categories.

The project will attempt to correct major problems identified in the current delivery system, which include fragmentation of services; poor distribution of personnel; poor maintenance of facilities; low public acceptance and utilization of services; poor control and management; lack of motivation, skills and practical experience on the part of health personnel; and inadequate outreach. In order to achieve these aims, the project will fund technical assistance, architectural and engineering services, renovation and construction of facilities, procurement of commodities, training, and other necessary costs such as feasibility studies and information, education, and communication activities.

The MOH has overall responsibility for the project. There is an Egyptian central project staff, assisted by four GOE-contracted firms: in technical assistance (Westinghouse Health Systems, U.S.), health sector assessment (ECTOR, Egyptian) and architecture and engineering (Alemara, Egyptian; and D.M.J.M./Kidde, U.S.)

The project paper implementation plan outlines how the major project elements will be carried out:

1. Planning, evaluation, and health sector assessment. The project will attempt to institutionalize the capacity for assessment and planning by providing technical assistance in developing techniques and conducting a health assessment in the demonstration area (and later in Greater Cairo). A procedural manual will be developed to guide future assessments. Such assessments will provide the information base which is now lacking and which is necessary for rational health services planning and evaluation.

2. Pyramidal service delivery. The current system is totally inadequate for the rapidly growing population. The project will establish and test a pyramidal delivery and referral system consisting of local Maternal Child Health Clinics (MCHCs), General Urban Health Centers (GUHCs), and a specialty pediatrics hospital. Services will be improved and community interaction stimulated to encourage people to seek initial care at the local level. The project will also expand preventive measures such as nutrition, family planning, immunizations, and sanitation through health education and outreach programs.

The fourteen existing MCHCs will be renovated and upgraded to enable them to provide primary services, with an emphasis on prevention and health maintenance: pre- and postnatal care of mothers and infants; well-baby and "under five" clinics; childhood immunizations; nutritional advice and intervention, including oral rehydration; dental care and simple dentistry; family planning services excluding surgical interventions; simple laboratory services; general health education and community outreach. Project experience will also contribute to resolving the current MOH uncertainty as to whether to continue peripheral MCH clinics or to absorb their functions into the GUHCs.

The GUHCs will provide secondary or intermediate care. Besides absorbing the functions of Health Bureaus (vital statistics registration, immunizations and food sanitation), they provide MCH services; school health services; curative care at the general practitioner level; all outpatient family planning services; clinical diagnostic laboratory services; diagnostic x-rays; pharmacy; and health education.

These urban health centers are designed to serve 150,000 people. Fourteen centers will be required for the demonstration area. Six already exist but need additional equipment and vehicles; eight additional GUHCs will be constructed and equipped. Three maintenance centers will also be provided, to be attached to a GUHC in each zone. They will repair GUHC and MCHC equipment in the zone.

Tertiary level services will be provided by referral from lower level institutions to the Cairo University Pediatric Hospital and the Al-Galaa General Maternity Hospital. A unit to house additional facilities at the pediatric hospital will be constructed.

3. Center for Social and Preventive Medicine (CSPM). The CSPM will serve an entirely new function, bringing together Cairo University's medical education function with the MOH's health delivery responsibility. It will provide practical "hands-on" experience to medical, nursing, and social service students and continuing education and refresher training for inservice doctors, nurses, midwives, auxiliaries, and other personnel, while providing MCH and nutrition services to the community. The CSPM will also conduct investigations of social aspects of health care and the problems of applying public health measures.

The CSPM will be staffed by Cairo University faculty and MOH personnel. It will be housed on one floor of the above-mentioned pediatric hospital addition.

4. Training and education of service personnel. Major attention will be given to upgrading the managerial and technical skills of all levels of health workers and developing training capabilities within the system. A research, development and training unit

within the Director's office will establish a detailed training plan during the first 6 months of the project and will coordinate training courses. Central level courses will be given by the MOH and Cairo University. When the CSPM begins operation, it will also train trainers for courses at peripheral facilities and hold inservice training for personnel, as well as provide practical experience for students. MCHCs will utilize existing staff for inservice staff training as well as information, motivation, and technical training for local leaders, home visitors and dayas (traditional midwives). Two participants per year will be selected for long-term U.S. training in fields such as health planning, statistics, preventive medicine, and health service management. Four others will be selected annually for short-term training in similar areas. In addition, observation trips for up to six persons per year will be sponsored.

5. Community participation, consumer motivation, and health outreach. Health services decisions in Egypt traditionally have been dominated by the providers, but there is now increasing awareness of the need for community participation in decision-making and sharing of health-related responsibilities. Community involvement will be sought in three ways: 1) Zonal steering committees will be established which will include two local leaders in each zone. One of these leaders for each zone will also serve on the overall project Executive Board; in addition, the six community representatives will select one of their number to represent consumers on the CSPM board. 2) A home visitors program will be tested in one zone. The MCHCs in that zone will use traditional health workers such as dayas and health barbers, natural community leaders and community personnel such as teachers and social workers as part-time home visitors. They will be trained and supervised by MCHC staff. These part-time personnel work in pre- and post-partum care, hygiene and sanitation, motivation, registration drives for the MCH clinics, nutrition and family planning information and instruction. 3) An information, education, and communications program will be established to motivate the practice of family planning.

#### IMPLEMENTATION EXPERIENCE

The following chart summarizes the project status as of mid-1980.

#### CURRENT PROJECT STATUS

<u>OUTPUTS</u>	<u>STATUS*</u>
1. Health sector assessment.	1. Began October 1980, in progress.

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| 2. Renovation of MCHCs (10).   | 2. Planning stage; plan approved for several MCHCs October 1980.   |
| 3. Construction/renovation of 14 GUHCs.                              | 3. Planning stage.   |
| 4. Establishment of CSPM.  | 4. Planning stage (construction).  |
| 5. System for procurement, supplies and maintenance.                 | 5. Assessment made and information gathered for implementation plan.   |
| 6. Innovative neighborhood health services; community participation. | 6. Implementation not yet begun; ongoing planning.   |
| 7. Pyramidal delivery and referral system.                           | 7. Planning stage.   |
| 8. Training program for 1,500 personnel.                             | 8. Inservice training on philosophy of PHC in all 3 districts began June 1979 (approx. 1,300 trained). Other training in planning stage. |

The grant agreement was signed in November 1978. The original project assistance completion date was November 15, 1983, but has since been changed to April 1984. Implementation began in June 1979 with inservice training of health system personnel in the project area in the general philosophy and approaches of primary health care.

Technical assistance activities began in May 1980, and to date have concentrated on developing necessary background information, a workplan, and initial plans for project systems and organization. Technical assistance is being provided by Westinghouse Health Systems (WHS) under a host country contract. WHS has two resident professional advisors in Cairo and one administrative officer.

The workplan was completed on schedule by the technical assistance contractor (WHS) in September 1980. The workplan established the parameters for all project activities except the health sector assessment, construction and renovation activities, and the Center

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\*Source: Monthly reports by contractors (WHS and ECTOR); interview with USAID/Cairo project officer.



for Social and Preventive Medicine, which are dealt with in separate documents. The plan details the activities and the steps necessary to accomplish them. It is meant to be flexible, and is to be updated every six months. Activities are grouped under 10 headings, with objectives and steps necessary to accomplish them detailed for each of the various sub-projects.\*

Work has begun on most of these sub-projects. According to the latest WHS monthly report (October 16, 1980), plans have been approved and early implementation activities are beginning in information, education, and communications, training; and committees on functions—seven have been established to review MCHC needs to guide renovation activities. Plans for several MCHCs have been approved. Preparatory organization and planning is proceeding for other activity groups. The only areas in which no activity has started are community-based care, categorical interventions, and pilot centers, which must await implementation of renovation, reorganization, and training activities.

The implementation plan, which was due for completion November 20, 1980, details priorities among the activities for the first 24 months and establishes time frames, personnel, and resource assignments for the plan's various segments. It also details training, short-term consultant needs and schedules, and evaluation procedures. (This document was not yet available in Washington at the time of writing.) Completion of this plan marks the beginning of the project's implementation phase.

The health sector assessment is being carried out by ECTOR, an Egyptian firm. The study, which began in October 1980 with an epidemiological survey in the Helwan zone, will be followed by the collection of socioeconomic and other data. Cases identified during the survey are to be referred to the MCH system for treatment.

The two architecture and engineering contractors have begun initial planning for renovation and construction work. Renovation of the MCHCs should begin soon (November–December 1980).

The project is progressing more or less on schedule, according to the USAID/Cairo project officer, except for delays incurred in negotiations with the four contractors. The original project paper plan was felt to be unrealistic in not allowing sufficient time for

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\* The major groups are: 1) organization and management; 2) personnel; 3) information, education and communications; 4) community-based care; 5) categorical interventions (introduction of innovative/experimental techniques); 6) procurement, supplies, and maintenance; 7) training; 8) evaluation; 9) committee on functions; and 10) pilot center(s).

the complex process of negotiating multiple host country contracts. Steps have since been taken to resolve these problems.

Problems encountered to date in the project center on developing a workable implementation plan--it has been difficult to deal with multiple claims and pressures and arrive at a focus on specific problems amenable to action. More specifically, monthly reports indicate problems with customs duties. The October report also notes a need to clarify delegation of authority to persons responsible for project activities. Steps have since been taken to resolve these problems.

No evaluations have been conducted to date. Regular AID/MOH evaluations are scheduled for approximately the 24th, 48th and final months of the project. The project's evaluation plan was originally scheduled to have been completed during the first six months, but due to rescheduling of the implementation plan and related activities, completion of the plan has been postponed until February or March 1981. Three kinds of evaluations are planned: on-going process evaluations; periodic impact evaluations; and evaluations of specific experimental interventions.\*

\* Source: Memorandum on "Suggested Approach to Developing the UHDSP Evaluation Plan," Veronica Elliott, October 2, 1980.

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TUNISIA

IDENTIFICATION

Project Name and Number:	Rural Community Health, Number 664-0296
Location:	Four rural provinces in central western Tunisia
Project Dates:	FY 1978 - 1984
Funding Level and Source:	AID: \$5.4 million (loan) \$2.2 million (grant) Government of Tunisia (GOT): \$2.7 million
Responsible Offices:	Health Officer, USAID/Tunisia  Bureau for Near East; Office of Technical Support; Health, Population and Nutrition; AID/Washington
Contractors:	Only short-term consultants have been on-site thus far (particu- larly for the design and renova- tion of health centers). Negoti- ations for a long-term team (two M.D.s, one nurse-practitioner and one management specialist) were completed in 1981 with the Family Health Care Division of University Research Corporation.
Implementing Agency:	Ministry of Public Health (MOPH)

## COUNTRY STATISTICS

Total Population: 6.0 million

Rural Population: 48%

Infant Mortality Rate: 123

Population Growth Rate: 2.0%

Life Expectancy at Birth: 56

GNP Per Capita: \$950

Adult Literacy Rate: 70%

## SYNOPSIS

The Rural Community Health Project intends to reform and expand the government's health delivery system in four provinces to become less physician-dependent and to offer all basic primary health services. It is possible that the new system will serve as a national model. Although some construction of new facilities has been completed, the retraining and reassigning of personnel--the heart of the project--has been delayed for over two years due to problems of deploying a long-term technical assistance team satisfactory to the GOT. Recently, the technical assistance question seems to have been resolved, and the project has been expanded to encompass four rather than the original two provinces.

## BACKGROUND

Over the past 20 years, the Government of Tunisia (GOT) has established a nationwide network of clinics and hospitals that provides some access to minimal basic curative services in all provinces. During this period, malaria and typhus have been eliminated, infant mortality has dropped from more than 200 per thousand live births to a little more than 100, and general life expectancy has increased by 10 years. The system's continued contribution to improved health, however, is limited by its strongly physician-dependent, curative orientation; by continued geographic inaccessibility; and by cultural inaccessibility due to the staffing of many facilities by foreign professionals who lack fluency in Arabic and French. As a result, much of Tunisia's rural population remains excluded from the basic level of primary health care it requires.

This project is only in some aspects a new effort, since it builds on prior work with paramedics by the Dutch, the Belgians, and Project Hope, carried out in collaboration with the Preventive Medicine Department of the Ministry of Public Health (MOPH). The present Rural Community Health project is attempting to establish, in a sizable field setting, a restructured rural health system that will progressively train the non-physician staff and expand their responsibilities. The project will also furnish support facilities required to give credibility and confidence to both providers and consumers. It is hoped that through this project the MOPH will gain experience in implementing a rural program that is considerably less physician-dependent; and that the Ministry staff will

gain the capacity to analyze, train, and monitor the performance of non-physicians as they undertake wider responsibilities.

The project location is Siliana, Sidi Bou Zid, Kasserine, and North Gafsa, adjacent provinces in central western Tunisia. Over 80% of their populations live on dirt roads, tracks, and paths in household units of 10-18 people. These provinces have socioeconomic and health status indicators among the lowest in the nation.

#### PROJECT DESCRIPTION

The project will involve:

- job restructuring and retraining of front-line health workers;
- design of both a management system and a patient record system to support newly-integrated preventive and curative services for rural areas;
- training and orientation of rural delivery system supervisors and managers, as well as the orientation of community leaders;
- support to improve clinical experience in medicine and public health for interns assigned to the four provinces.

The capital assistance activities include the design, renovation, construction and equipping of 60-70 facilities which will provide integrated primary health services at the delegation, regroupment, and village levels.

The U.S. inputs for the project will provide \$5.39 million as reimbursement to the GOT for construction, renovation, and equipment costs, and \$2.24 million for technical assistance. Technical assistance funds will support a three-person team of technical advisors and some training.

The planned outputs of this project are:

- a curriculum for training non-physician health workers in new duties;
- 500 retrained workers, supervisors, and local officials;
- renovation and construction of 60-70 new primary care facilities;
- an operating field training program in rural health for interns; and

- improved patient record and management systems.

If successful, the project will establish a field opportunity for medical students to learn the principles and practices of rural community medicine. The project should also contribute significantly to establishing replicable national standards for the broad use of non-physicians.

Health facilities in this project are of three types, designated A, B, and C. These levels constitute a hierarchy in sophistication and amount of equipment, personnel, and services offered. Type A centers are located in towns of 2-5,000 people, type B centers in towns of 5-10,000 people, and type C centers in towns of 10,000 or more people. Type A centers may be staffed by as few as one paraprofessional but are to offer preventive and simple curative services in homes, schools, public areas, and the center. Type B centers have up to 10 maternal beds and a minimal laboratory. Type C centers are staffed by at least one physician and one midwife and have up to 15 beds.

Services offered at all the facilities will include:

- Adult routine basic clinical care for minor illnesses, chronic illnesses, minor trauma and emergency first aid, stabilization of major trauma;
- Prenatal care, labor and delivery, postnatal care, gynecology;
- Routine pediatric clinical care;
- Family planning;
- Nutrition and hygiene education;
- Immunization/vaccinations;
- Environmental education;
- Malaria screening;
- Water supply testing;
- Inspection of public and commercial places; and
- Dog control

#### IMPLEMENTATION EXPERIENCE

Although some construction of facilities has been completed, the retraining and reassigning of personnel has been delayed for

over two years due to problems of deploying a long-term technical assistance team satisfactory to the GOT. These problems began in 1977. After AID awarded a contract to one firm, the firm's proposed consultant team was not available, and then a second team was not accepted by the GOT. A new RFP was issued, and a second institution was awarded the contract. Soon thereafter, the proposed team leader was incapacitated by illness, so that neither he nor his wife (also a team member) could serve in Tunisia. Negotiations were then broken off and begun with a third contractor, the University Research Corporation, with which an original bidder, Family Health Care, had since merged. In May 1981, these discussions concluded in the signature of a contract for three years of service. The team is expected to arrive in September 1981.

The best explanations of the problems in fielding a technical assistance team seem to be that

- the MOH already has many capable staff and thus expected a U.S. technical assistance team to be of exceptional caliber, and
- U.S. firms and institutions have had difficulty finding highly qualified individuals willing to accept a long-term assignment in central Tunisia.

Whatever the explanations of the problems to date, the technical assistance issue has now seemingly been resolved. It is even possible that the delay has been fortuitous since, in the interim, the MOPH has embraced the primary health care concept and is moving forward with changes to better support primary health care. The fact that over the course of the project the GOT increased its contribution to the capital component reflects this trend.

Despite delays in some essential project activities, the Rural Community Health project has in fact been instrumental in encouraging the concept of primary health care in Tunisia. The World Bank recently signed an agreement with the GOT for the construction of a large number of rural health facilities in the northwestern part of the country. These will be staffed along lines similar to those outlined in the Rural Community Health project plans. Furthermore, an amendment was recently approved to extend the time of AID's project and to expand activities to other central Tunisian provinces. Finally, two Tunisian physicians who participated in an AID-sponsored tour of U.S. and Canadian PHC programs returned to Tunisia and established a PHC project along the lines of the Rural Community Health project. A recent review of the project's first several years in operation yielded the following problem areas:

- Psychological and administrative resistance to change.
- Problems with the financial management of the project funds.



- Lack of public health training for medical and paramedical staff.
- Absence of precise evaluation criteria.
- Lack of community participation.

Once the AID project activities are underway, many questions will be of interest; for example, how the physicians are accepting the expanded roles of paraprofessionals; if personnel incentives, quality of retraining, and on-the-job support are sufficient to make the non-physician personnel satisfied in their new role; if preventive services are holding their own against curative; if service delivery research is being conducted; if the costs are affordable; if efforts are being made to incorporate indigenous practitioners; how well the new facilities are being utilized; and, of course, how effective the services are in improving health.

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### Interviews:

Oliver Harper (by phone), former AID health officer in Tunisia, December 1980.

Julie Weissmar (by phone), Division of Health, Population & Nutritional Development, Bureau for Near East, AID/Washington, October 1980 and January 1981.

YEMEN ARAB REPUBLIC

IDENTIFICATION

Project Name and Number: Tihama Primary Health Care, Number 279-0065

Location: Tihama region (Hodeidah Governorate)

Project Dates: FY 1980-FY 1985

Funding Level and Sources: USAID Grant: \$11,420,000  
Yemen Arab Republic Government (YARG): \$10,600,000  
Catholic Relief Services: \$1,080,000  
Peace Corps: \$540,000  
Others (including German volunteers; drugs, equipment, supplies, and transportation from UNICEF): \$1,800,000

Responsible Offices: Health Officer, USAID/Yemen  
Bureau for Near East; Office of Technical Support; Health, Population and Nutrition, AID/Washington

Grant Recipient: Catholic Relief Services (CRS)

## COUNTRY STATISTICS

Total Population: 5.6 million

Rural Population: 61%

Infant Mortality Rate: 160

Population Growth Rate: 2.3%

Life Expectancy at Birth: 39

GNP Per Capita \$520

Adult Literacy Rate: 13%

## SYNOPSIS

This project, which began in the summer of 1980, continues Catholic Relief Services work in the poor Tihama region of Yemen. The project seeks to assist the Ministry of Health develop a primary health care (PHC) system that will reach at least 75% of the population and will serve as a model for the remainder of the country. Small PHC outlets in 250 village clusters will be staffed by locally recruited health workers. These village units will be supported by three regional health centers and ancillary subcenters operating with the support of the regional referral hospital in Hodeidah. CRS staff will teach health trainers (who in turn will teach village health care workers) and mid-level administrators and managers. The project will also provide some initial equipment and supplies.

## BACKGROUND

Because of Yemen's long period of isolation from the rest of the world, and because of the government's minimal budgetary resources, the development of medical facilities throughout the country has been extremely slow. Those which do exist are mainly curative in function. In the Tihama region, curative care clinics with minimal services exist in only four towns.

As part of the WHO country programming process, the YARG developed a Basic Health Service/Primary Health Care Plan in 1976 and invited international assistance to implement it. The plan was designed to improve health training, develop information systems, and increase technical assistance so that PHC could be implemented throughout Yemen. The Tihama PHC project, a plan to establish a PHC system in the poorest region of the country, will be a major step in this direction.

Catholic Relief Services (CRS) enters this ambitious undertaking with the experience of already having run two recent health projects in the Yemen Arab Republic: (1) a health/nutrition education project that has trained paramedical workers (including some women) at Hodeidah and Sana'a; and (2) a second project that has supported training and staff development at Al Olofi Hospital in Hodeidah. Through these programs, CRS as an institution and CRS staff as individuals have gained essential experience for the comprehensive,

Tihama-wide health project that began in 1980.

The target population of this project is the rural population of the Tihama, a strip of sandy coast bordering the Red Sea, about 40 kilometers wide and running vertically up the coast almost to Saudi Arabia. Unlike the majority of Yemen, which is mountainous with a temperate, dry climate, Tihama is flat, sandy, and humid with temperatures in the 100's most of the year.

Almost 90% of the 800,000 inhabitants live in rural areas. Aside from migratory worker remittances (less significant than in other parts of Yemen), the main sources of livelihood in rural Tihama are fishing, farming (often sharecropping), weaving, and goat herding.

Because of its sandy soil and inhospitable climate for agriculture, Tihama is Yemen's poorest region. Indications are that possibly as many as 40% of female deaths are related to child-bearing. Diseases such as malaria, bilharziasis, tuberculosis, and such problems as gastroenteritis and infant dehydration—all of which can be alleviated, if not prevented, with proper attention—are rampant. Life expectancy is estimated at only 37 years.

A significant aspect of this project will be its reliance on local development associations (LDAs) for financial and managerial contributions. LDAs (called cooperatives in Arabic) consist of a general committee, averaging 40-50 members, elected by the people. This committee meets at least once a year. Members of hamlets and villages gather and elect for 3-year terms one representative for every 300-800 persons. Each general committee elects an administrative committee of 5-7 members, which in turn elects officers. The LDA heads from each governorate form an LDA coordinating council. As part of the project, LDAs will receive assistance to develop their capacities to plan, finance and manage primary health care units.

According to the YARG 5-year plan (1976-1981), each LDA was required to develop its own 5-year plan tied to the national one in four sectors: water, roads, education, and health. Most LDAs have completed these plans. Each year the LDAs draw up plans for their projects. LDAs receive portions of national taxes on agriculture and imports and may also require local contributions from families.

#### PROJECT DESCRIPTION

The major purpose of the Tihama Primary Health Care Project is to provide access to a cost-effective PHC system to the majority of the rural population of Hodeidah Governorate (this division includes most of the land areas of the Tihama). The entire PHC system will be built up virtually from scratch: facilities, personnel, logistics and management capabilities must all be developed.

The network of PHC units is to include 3 existing health centers, 12 new health subcenters, and as many as 250 new community service areas supported by the major referral center at Al Olofi Hospital in Hodeidah. Every level has priority functions in preventive and promotive activities. Even when curative care is provided, every effort will be made to integrate the activity with some educational advice and to encourage the person or family to participate in appropriate community health education activities.

The project staff will coordinate a training program, train trainers, and train (with some assistance from the National Health Manpower Institute) the following categories of health providers:

- up to 750 local birth attendants and primary health care workers (PHCWs) selected by the LDA or the community
- up to 40 community health nurses
- up to 12 medical assistants
- up to 30 supervisor/trainers

All levels of PHC units will carry out more or less the same services with varying degrees of proficiency. These functions are:

- MCH
- communicable disease control
- medical care
- environmental health
- functions related to information, logistics, collaboration, and administration

The major responsibilities of the local birth attendants, for example, are to:

- give prenatal care: obtain a comprehensive history, examine the pregnant woman, check weight, test urine, check edema, examine the abdomen;
- give advice on nutrition, personal hygiene, breastfeeding, baby care;
- teach mothercraft;
- detect abnormalities of pregnancy and labor, and disease associated with pregnancy—refer if feasible to next higher level;

- conduct home visits for sick prenatal women; prepare for home delivery; provide mother and child care during postnatal period;
- render safe midwifery at normal childbirth;
- resuscitate the newborn, care for the newborn;
- detect and refer abnormalities;
- refer sick or premature infants;
- advise on and supervise breastfeeding and weaning;
- advise the mother on immunization;
- advise on family health activities.

CRS technical assistants will work in two separate teams: a field team composed of a physician, a community health nurse, a midwife, and a mechanic; and a central team (in Hodeidah at Al Olofi Hospital) composed of a midwife, a MCH practitioner, and a pediatric practitioner. Both teams will be coordinated by an administrator who will assist the team with their Yemeni counterparts and support staff to develop and stabilize a primary health care infrastructure. An educator will develop and coordinate the entire training program which occurs in three rural field sites.

The project emphasizes the importance of human resources rather than costly buildings. Where possible, the PHC providers will be chosen from individuals already providing traditional types of care, and they will be trained, as a supplement to their present skills, in more modern techniques.

In addition, a cadre of 16 specialists will be trained abroad to the master's degree level in various aspects of public/primary health care, and 40 technicians will be trained abroad in short-term specialized programs. These people will serve as a cadre to assume responsibility for replication of the Tihama pilot project elsewhere in Yemen.

Training materials will be developed in all phases of primary health care and workshops and seminars will be organized on a regular basis. One strategy is to demonstrate the efficacy of primary health care, in order to facilitate continued and national governorate priority support of PHC and to allow interdisciplinary sharing between curative and preventive sectors.

The project addresses the need for mid-level supervisors by providing sufficient support staff (U.S. and German volunteers and CRS staff) until sufficient medical assistants and community health nurses are trained as supervisors/trainers. Supervision should occur quarterly.

The system will develop a functional referral system for high-risk patients and 75% of the referrals will be traced. Outreach for high-risk patients is emphasized at all levels of care.

A cost accounting system will contribute to replicability of the system elsewhere. Community surveys, before and after service is provided, will provide evaluative data regarding the impact of the system. Standard operations manuals for all components of the system will facilitate the system's replication.

Additional purposes of the project are:

1. To develop the local development association's capacities to plan, finance, and manage the PHC units.
2. To develop the PHC training capacity in the Basic Health Services Office of the Ministry of Health in the Hodeidah Governorate in accordance with the Health Manpower Institute guidelines.
3. To develop the capacity at 12 centers, 3 subcenters, and the Al Olofy outpatient department to deliver a standard package of services to patients referred by the PHC system.
4. To develop a Basic Health Services logistic system that adequately supports centers, subcenters, and the PHC system.

CRS feels that this project is unique because it:

- is the first project to attempt to implement the Basic Health Services plan in Yemen;
- pioneers the role of women in the health profession by training a cadre of community health nurses and local birth attendants; communities will be encouraged to select local traditional healers as PHCWs. (As the social analysis for the project states, "Village people use traditional healers a great deal, not only because they lack access to the formal system, but because they trust their own people and their own cures.");
- will explore systems of local financing to complement the Ministry of Health's central financing—the project's professionals will plan and develop each community's health program with the local development association of the area;
- enables LDAs to tap into a \$300,000 revolving fund to pay for local health expenditures of their choosing (for drugs, construction, salary supplements, etc.). LDAs must repay the loans (with no interest) from monies they collect through revenue sharing and local taxation.



Another unique intention of the project is to involve the LDAs in co-opting the unofficial drug sellers found in most communities. The project plans state that the sellers' direct involvement in an official, legalized system may not be an acceptable answer, but locally the LDAs may be able to devise an acceptable compromise.

### IMPLEMENTATION EXPERIENCE

This large-scale project (over 20 million dollars over a six-year period) is being undertaken in an atmosphere replete with constraints. Much careful planning has taken place, however, and it is hoped that through this clear recognition of problems and the culturally-sensitive and experienced management of CRS, these obstacles may be overcome. Among the problem areas are the following:

Financial: In part because of minimal taxation, the YARG's financial resources are extremely limited. Despite a trend toward more government funding of health projects, the amount of money available is quite small. Local development authorities (LDAs), increasingly active in development efforts, are being relied on for important financial and organizational contributions. Rampant inflation adds to these financial difficulties. Furthermore, the YARG's insistence on providing free services (as a political decision) limits the options for local financing of recurrent project costs, which is an important goal of the project planners.

Manpower: There is an acute shortage of trained manpower in the Yemen Arab Republic. Managers and health service providers of most categories are almost nonexistent. Compounding the problem is the fact that only 2% of the country's women are literate, making the recruitment of women a major problem. This is particularly important in a Muslim culture where women can generally receive medical attention only from women. This cultural stigma against male/female interaction outside the family can also be expected to pose a special challenge to training female candidates.

Incentives for government service are low. Current government health personnel receive low salaries and have little motivation to serve the public well. They sometimes demand bribes to provide curative services. Such behavior, together with overcrowded facilities, has led to a popular avoidance of government health facilities in favor of traditional healers.

Infrastructure: Transportation, communications, and logistics infrastructures are extremely rudimentary in the Tihama. Adequate supervision, a key to the success of isolated auxiliary health personnel, will be especially difficult under these circumstances.

As of July 1980, a YARG-CRS agreement had been signed, and recruitment was beginning for 10 medical professionals on the project's field staff. The Ministry of Health had supplied offices for CRS staff, and other preliminary activities were commencing. The update of this report should contain a description of the actual implementation.

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