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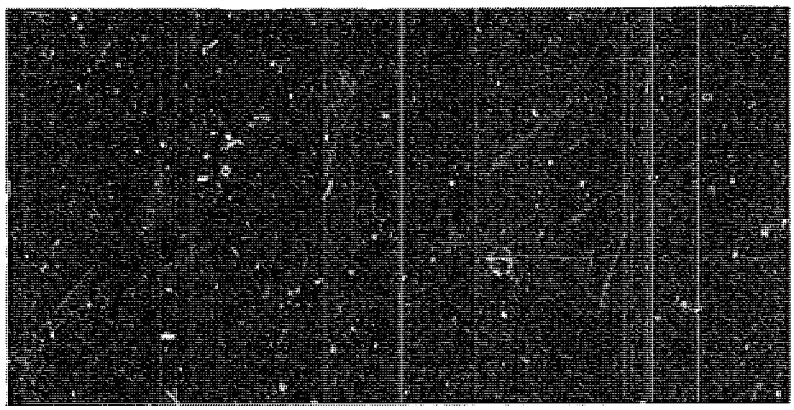

AMERICAN PUBLIC HEALTH ASSOCIATION
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MIDTERM EVALUATION OF THE

THAILAND RURAL PRIMARY HEALTH CARE

EXPANSION PROJECT

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ABBREVIATIONS

AFPH	Accelerated Family Planning and Health
AMW	Auxiliary Midwife
APHA	American Public Health Association
CIC	Central Information Center
CNC	Child Nutrition Center
DCMO	District Chief Medical Officer
DH	District Hospital
DHO	District Health Officer
DTEC	Department of Technical and Economic Cooperation
DDHO	Deputy District Health Officer
DPT	Diptheria, Pertussis, Typhoid
E&R	Evaluation and Research
FP	Family Planning
GPO	General Purchasing Organization
JS	Junior Sanitarian
HA	Health Assistant
HPD	Health Planning Division
IDA	International Development Association (World Bank)
IEC	Information, Education and Communication
MCH	Maternal-Child Health
MOPH	Ministry of Public Health
MW	Midwife
NESDB	National Economic and Social Development Board
NFPP	National Family Planning Program
NHDI	National Health Development Institute
NIDA	National Institute for Development Administration
NP	Nurse Practitioner
O/HPN	Office of Health, Population and Nutrition
PAFU	Project Administration and Financing Unit
PCMO	Provincial Chief Medical Officer
PHC	Primary Health Care
PHN	Public Health Nurse
PMIS	Planning, Management and Information System
PN	Practical Nurse
RN	Registered Nurse
RTG	Royal Thai Government
SEARO	South East Asian Regional Office of the World Health Organization
TBA	Traditional Birth Attendant
UNFPA	United Nations Fund for Population Activities
UNICEF	United Nations International Children's Fund
USAID	United States Agency for International Development
VHC	Village Health Communicator
VHV	Village Health Volunteer
WB	World Bank

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I. EXECUTIVE SUMMARY

A three-member team was organized to evaluate the three-year (FY 1979-FY 1981) $5,500,000 Thailand Rural Primary Health Care Expansion Project. (See, AID-DLC/P-2285 contract.) The team was asked to determine how effectively, efficiently, and successfully the specific goals and objectives have been met.

Summary of Major Findings

A. Short-term Training

As of December 31, 1979, 4,678 of the projected 7,892 village health volunteers (VHVs) had been trained; 46,546 of the projected 79,655 village health communicators (VHCs); and 2,938 of the projected 3,484 tambon trainers. Of the 900 nurse practitioners targeted for training, 321 had been trained; 1,055 of the 2,250 auxiliary midwives and 872 of the 1,314 health assistants had been trained. All 20 chiefs of planning had participated in the management training programs; none of the 40 chiefs of administration and none of the 365 provincial and district administrators had been trained. All but three of the 103 chiefs of promotion sections had received the required training.

With the exception of the programs for nurse practitioners, supervisors, and management personnel, all training activities are on schedule. The level and quality of the training seem quite good, considering the enormity of the effort.

B. Management and Supervision

The key supervisory and management levels of the provincial primary health care delivery system include tambon (township) health services, district health services, and the provincial health office. Midwives and junior tambon sanitarians supervise the work of VHVs and VHCs, health assistants, and, in some cases, practical nurses. The district health officer (DHO) or district hospital (DH), a physician or nurse practitioner, and the chief of health promotion at the district hospital share the responsibility for supervising the district tambon health workers. The primary health care supervisor is responsible for overall supervision of the tambon and village network under the jurisdiction of the provincial health office.

Key management personnel include the provincial chief medical officer (PCMO) and the various section chiefs. These people have received little formal management training. The orginal plan for this project included

a variety of short courses for managers and supervisors; the objectives were to help management personnel understand how the expanded PHC delivery network operates and to upgrade supervisory skills. These simultaneous objectives were unrealistic.

C. Evaluation and Research

Progress in evaluation and research has been slow. Program activities have been hampered by the delay in hiring an evaluation and research consultant; by the Thai Government's reluctance to provide or use loans for research; by USAID's decision to deny honoraria to staff of the Ministry of Public Health (MOPH) who are working on project-related research;* by the inability to subcontract universities; and by the inability of Health Planning Division (HPD) staff to handle their own heavy workloads while simultaneously conducting the proposed research.

Of the nine research studies planned, only three have begun; $400,000 of the original $516,000 budgeted for research has not been spent.

The evaluation and research consultant arrived four months ago and has successfully integrated himself into the HPD. He is working closely with the evaluation and research coordinator, training coordinator, secretary, and four research assistants--all of whom are nationals--to upgrade their research capabilities.

The HPD has begun to address seriously the task of designing an appropriate strategy to expand evaluation and research activities during the remainder of the project. It plans to conduct several minor studies and will make a major effort to promote technical assistance to and research funding for programs at both provincial and district levels. The Division is in critical need of effective mechanisms for coordinating health services research, evaluation, and planning.

D. Improvement and Use of Rural Health Delivery System

The ultimate proof of the effectiveness of the rural health care delivery system will be declining population growth and reduced maternal and infant mortality rates. Ideally, the data system should produce a status report, but data that indicate the extent of health service coverage and other outputs are not available; thus, mid-term progress cannot be measured. Nonetheless, the team was able to observe conditions at field sites; their observations indicate that the PHC system is working reasonably well, although staff have had trouble distributing resources and do not fully understand how their primary health care activities can resolve certain health and development problems. The problems peculiar to the PHC system have not been defined clearly.

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* Other donors' policies on honoraria are less strict.

Summary of Recommendations

A. Evaluation Strategy

The Fifth Five-Year Plan should be made available to evaluation consultants before they begin their final evaluation in 1981. Members of the Thai Government should be included on the team. The evaluators should address priority questions about plans for future health projects.

B. Short-term Training

In addition to basic training, refresher courses on curative care; information, education, and communication (IEC); community development; and other essential information should be provided. Research on training programs and methods should be coordinated with the Health Training Division. Performance evaluations should be made to determine the effectiveness of the training activities. VHVs should be retrained periodically in the appropriate use of medications, especially new drugs. The provision of career development opportunities for health assistants should receive special attention. Curative care provided by recently trained auxiliary midwives and nurse practitioners should be monitored for quality control.

C. Management and Supervision

Practical problem-solving sessions should be incorporated into team management and supervisory training programs for district managers and for tambon-level supervisors of VHVs and VHCs. Data management and information flow should be emphasized to ensure that data are used in central and local management decision making processes.

D. Evaluation and Research

Additional temporary research assistants and one fully qualified research professional should be hired to assist with new studies and to support the research development assistance program. HPD and project staff should hold in-service working sessions for provincial and district personnel who are preparing their own studies. Some provision should be made for translating research proposals and reports into English.

The HPD should make several small-scale studies and design an effective program to support practical research in the provinces and districts. Efforts to design effective mechanisms for coordinating and using health services research and evaluations should be continued. The Division should continue to meet with HPD staff to prepare a strategy to promote research and evaluation.

Improvement and Use of Rural Health Delivery System

The system for monitoring and evaluating the health care delivery system should be strengthened. A practical methodology for making quality assessments should be designed and used. Skills in emergency first-aid should be upgraded. Drug supply and distribution problems should be resolved and a comprehensive approach to primary health care adopted.

Future Project Development

Planned primary health care activities should be continued. Simultaneously, an effort should be made to target priority areas in community health for special attention; for example, the problems of child malnutrition, drug supply and distribution, and health information systems should be studied. The development of primary health care as part of the community's overall development and improvement should be encouraged. Multisectoral cooperation should also be supported.

II. MAJOR FINDINGS AND RECOMMENDATIONS

Introduction and Background

A. Country Health and Health System Profile

Thailand had a population of 44 million in 1977, and an annual growth rate of 2.5 percent. Its health problems are common to all developing countries. In 1977, the infant mortality rate was approximately 89 per 1,000 and life expectancy at birth, 58 years.

Under the pyramidal health system, a provincial chief medical officer (PCMO) heads the provincial health office in each province and the various service facilities, including provincial and district hospitals. The PCMO is responsible for district and tambon health centers and village midwifery centers. Government health services have been hampered by the lack of adequate facilities and trained personnel. Competition from alternative medical systems, both traditional and private, is strong.

B. Description of Population Project

The Population Project is a three-year (FY 1979-FY 1981) $68 million multi-donor effort funded by the World Bank, Australia, Canada, Norway, the U.S. (USAID) and the Royal Thai Government. Its goals are to reduce the rate of population growth from 2.5 percent in 1977 to 2.1 percent in 1981 and to reduce maternal and infant mortality by 50 percent by 1981. These objectives will be achieved by expanding the rural health care infrastructure; increasing the number and quality of paramedical workers in rural areas; introducing to villages new types of volunteer health and family planning workers; stimulating increased community support of and demand for family planning services; and improving the managerial, supervisory, and evaluative and research capabilities of the MOPH. Project activities will be conducted in 20 of Thailand's 72 provinces; (the number of people who use family planning services and the extent of rural health facility coverage in these 20 provinces are well below national averages.)

C. Description of USAID Rural Primary Health Care Expansion Project

This project, funded by a three-year $5,500,000 USAID loan to the Royal Thai Government (RTG), is an integrated component of the larger population project, which aims to make primary health care more accessible to the rural population in the 20 provinces. It proposes to accomplish

this goal by developing health manpower training programs for a variety of workers at district and lower levels; improving the management and supervisory skills needed for an expanded rural primary care system; and improving the health program evaluation and research capabilities of MOPH staff working at the central level and in the provinces.

Evaluation Strategy

A. Purpose of Evaluation

The purpose of the mid-term evaluation was to determine how effectively, efficiently, and successfully the specific project goals and objectives are being met.

B. Participants in the Evaluation

The evaluation team included Michael M. Stewart, M.D., M.P.H. (team leader); Ann Brownlee, Ph.D.; and Constance A. Freydig, M.A., M.P.H.

C. Methodology

The evaluation, conducted from February 25 to March 21, 1980, was divided into three phases: briefings, document reviews, and preliminary analysis and problem identification; field visits to five project provinces; and preparation, presentation, and discussion of the report.

D. Recommendations

In the future, RTG officials should be asked to participate in evaluations. All participants should be given sufficient time to plan their schedules and to carry out pre-evaluation activities.

The Fifth Five-Year Plan should be made available to consultants before the final 1981 evaluation begins. The final evaluation team should include RTG officials, as well as outside consultants. The team should consider priority needs that will affect or should be addressed in plans for future health projects in Thailand.

Assessment of Project Status and Recommendations

A. Short-term Training

1. Progress and Problems*

Training is being provided for a large number of personnel in 10 basic categories. (See Table 1, which compares current status with projected targets.) USAID is funding training programs for village health volunteers (VHVs) and village health communicators (VHCs); tambon trainers; nurse practitioners; auxiliary midwives; health assistants; child nutrition center (CNC) attendants; and certain supervisory and management personnel. As Table 1 shows, the training schedule is on target for VHVs and VHCs, tambon trainers, auxiliary midwives (in basic health care), health assistants, and CNC attendants. Training for nurse practitioners and supervisory and management personnel is behind schedule. Considering the enormity of this effort and the logistical and administrative challenges involved, progress made thus far is quite impressive.

2. Recommendations

The evaluation team recommends the following:

- In addition to basic training, continuing education and refresher courses on curative care should be offered and other essential information provided.
- Special efforts should be made to upgrade the skills and enhance the competence of paramedicals responsible for information, education, and communication (IEC) activities and, in particular, community development efforts. The Health Training Division, Rural Health Division, and the IEC Project should coordinate their activities.
- HPD research on training should be coordinated with Health Training Division projects.

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* Observations on the selection and recruitment of training candidates, responsibilities of those trained, course content and methodology, supervision, evaluation of training, and topics requiring further study are contained in the body of the report.

Table 1

POPULATION PROJECT TRAINING ACTIVITIES
(FY 1978-FY 1979)

Training Program	FY 1978 Target	FY 1978 Actual	FY 1979 Target	FY 1979 Actual
1. Health Assistants: 4 - week	41	36	270	272
6 - week	50	47	423	517
2. Nurse Practitioners: 6-12 months	150	129	300	166
3. Teaching/Learning Process	70	65	130	154
4. Nurse Instructors: 2 - month	60	60	80	89
5. Basic Medical Care: 4 - month	350	345	730	710
6. DDHO/Supervisors	110	193	110	49
7. CNC Attendants	45	-	75	123
8. PHC - Tambon Trainers	1,428	1,342	2,056	1,596
- VHCs	20,655	18,549	29,000	27,997
- VHVs	1,992	1,889	2,900	2,789
9. Management - Chief, Planning	20	20	-	-
- Chief, Administration	-	-	40	-
- Prov/Dist, Administrators	-	-	365	-
- Chief, Promotion Section - Dist - Hosp	-	-	103	101
10. Population Awareness	60	-	60	125

- Actual performance evaluations of former trainees should be incorporated into future analyses of training effectiveness.
- There should be adequate incentives for village health volunteers.
- VHVs should be retrained periodically in the appropriate use of medications, especially new drugs.
- The provision of career development opportunities for health assistants should receive special attention.
- Curative care provided by recently trained auxiliary midwives and nurse practitioners should be monitored for quality control.

B. Management and Supervision

1. Progress and Problems

Full implementation of the project in the 20 provinces will require effective coordination and supervision of a large number of health care personnel. The tambon health services, district health services, and provincial health office will assume responsibility for supervision and operation.

Tambon trainers (midwives and junior sanitarians) must oversee the work of VHVs and VHCs, health assistants, and, in some cases, practical nurses. These junior health workers have received some training in management and supervision but have never before supervised VHVs and VHCs. This skill should be developed further.

The administrative and technical supervision of midwives and sanitarians is the responsibility of the DHO or DDHO, physician or nurse practitioner, and chief of health promotion at the district hospital. The primary health care supervisor is responsible for overall supervision of the tambon and village primary health care network. The key management personnel are the PCMO and the section chiefs in the provincial health office. To date, these persons have received little formal management training, although the original training plan included a variety of short courses designed to help supervisory personnel understand the expanded PHC delivery network and to upgrade their supervisory skills.

2. Recommendations

The evaluation team recommends the following action:

- o Practical problem-solving sessions for provincial, district, and tambon workers should be incorporated into team management and supervisory training programs. A strategy to strengthen planning and evaluation activities of the health planning sections should be adopted. Additional supervisory training for tambon supervisors of VHVs and VHCs should be provided.
- o Particular emphasis should be placed on data management and information flow at all levels to ensure that data are used appropriately in local management decision making and reported to higher administrative levels.

C. Evaluation and Research

1. Progress and Problems

The proposed evaluation and research activities are designed to strengthen the Health Planning Division's coordinating capability; to improve planning and monitoring activities in the 20 provinces; and to design and implement selected operational and evaluation studies. Nine such studies were proposed in the project paper. The budget for this section was $846,000, to be expended over three years. One research and evaluation consultant, one research or administrative assistant, one secretary, and short-term technical consultants will be or have been added to the staff.

A research and evaluation consultant (the only staff member who is not a national), a research and evaluation coordinator, a training coordinator, one secretary (another will be hired), and three research assistants (paid out of short-term consultant funds) now support department staff.

Compared with other project activities, fewer evaluation and research activities have been implemented. The delay in locating and hiring an appropriate evaluation and research consultant (he joined other staff last November); the RTG's reluctance to use loan money for research; denial of honoraria for MOPH personnel involved in research; the lack of support for subcontracting USAID-sponsored research to universities; and the inability of HPD staff to handle their heavy workload in addition to proposed research activities have thwarted progress. Some people have also questioned HPD's role as the most appropriate sole supporter of research and evaluation.

Only three of the nine proposed studies have been approved and initiated. More than $400,000 of the original $516,000 budgeted for these studies has not been spent.

The research and evaluation consultant, who arrived four months ago, has successfully integrated himself into the HPD and is serving as an effective resource for staff who want to strengthen their research capabilities. He helped design a study on the evaluation of VHV and VHC performance and is seeking more effective ways to coordinate and further develop research and evaluation activities.

The HPD has begun to address seriously the need for an appropriate and realistic strategy to expand evaluation and research activities during the remainder of the project. It plans to make several additional minor studies on critical issues and will make a major effort to provide support, technical assistance, and funding to provincial and district health workers who wish to engage in practical research on their own health delivery problems. The HPD and other groups within the MOPH are attempting to design effective mechanisms for coordinating health services research, evaluation, and planning activities. This is a difficult task, and much work must be done.

2. Recommendations

The evaluation team recommends the following action:

- Several temporary research assistants should be hired to assist with studies at the central, provincial, or district level; one fully qualified research professional should be employed to handle additional studies to help implement the proposed research development assistance program in the districts and provinces.

- AID and HPD should continue to discuss the legality and appropriateness of providing incentives that encourage MOPH involvment in project-supported research. Reaching agreement on an acceptable solution to the problem of incentive should be viewed as an urgent priority within the program, as disagreement concerning honoraria seems to have been a significant factor in retarding the development of an effective research capability. In addition, AID and HPD should reconsider the possible role of universities and other non-governmental and governmental groups as direct participants in AID-funded research. Both of these issues should be resolved expeditiously by AID and HPD so that a clear and realistic strategy can be developed for new research activities.

- Provision should be made for translating research proposals (including data collection instruments and data processing protocols) and research reports into English.

- HPD and project staff should consider holding in-service working sessions for provincial and district personnel who are preparing their own studies. This would constitute a practical approach to health services research training.

- The HPD should consider designing and implementing several additional small-scale studies under project auspices. In addition, it should emphasize support (including financial) of practical research in the provinces and districts.

- Efforts to design effective mechanisms for coordinating and using health services research and evaluations should be continued. Guidelines for health services research should be finalized and implemented as soon as possible.

- USAID and HPD should try to resolve any remaining problems and outline a strategy for future activities.

D. Improvement and Use of the Rural Health System

1. Progress and Problems

Improvements in and use of the rural health services delivery system are reflected in a declining population growth rate and reduced maternal and infant mortality rates. Health service coverage is now being measured by certain intermediate outputs, including increased ambulatory care visits (by 1981 these are expected to increase from an average of 0.21 to 2.0); increased immunization of children under age one against DPT and BCG (by 1981, the number immunized against DPT will increase from 27 percent to 60 percent; the BCG target has already been met); increased antenatal care for pregnant women (43 percent now receive antenatal care; the percentage will increase to 80 percent by 1981); increased professional attendance to deliveries (an increase from 13 percent to 40 percent is expected); and increased registration of infants for child welfare services (an increase from 13 percent to 68 percent is expected).

Ideally, the data system should be able to produce an updated status report; however, because complete data are not available, the progress that has been made in expanding health service coverage cannot be measured. Nonetheless, the evaluation team made a number of field visits to observe the system at work. They noted that VHVs actively refer villagers to midwifery and tambon health centers, and as a result, use of these services seems to be increasing. Significant progress in achieving immunization targets has been made, although there are some problems with the "cold chain" in a number of areas.

Government midwives appear to be handling only a small proportion of deliveries because traditional birth attendants are still preferred. There is evidence that government midwives work well with their traditional counterparts.

Given a large, dispersed rural delivery system, problems can be expected. The team observed that despite the difficulties in appropriately distributing resources and despite the shortage of vehicles, gasoline, etc., there is an impressive amount of activity in the primary care system. Physicians must not only provide curative care but have also the equally important job of supervising paramedical personnel. These activities compete for the physicians' time. A formal emergency transportation system is needed. Problems in the appropriate use of frequently dispensed drugs and with drug distribution and supply were evident. It is clear that problems such as infant and maternal nutrition, human waste disposal, and water availability will require more attention and resources than are now available to the expanded primary health care system.

2. Recommendations

The evaluation team recommends the following next steps:

- Constant monitoring and evaluation of the health delivery system are needed to ensure effective management and to assess the impact of the system on the community. An appropriate method for conducting these activities should be adopted.
- A practical methodology (based on available recorded data) for quality assessment should be adopted and guidelines on the use of frequently dispensed drugs prepared.
- Emergency first-aid skills should be upgraded.
- Efforts to improve the system of drug supply and distribution should be continued; appropriate methods for supplying drugs to VHVs should be devised.
- Strategies to develop a more comprehensive approach to primary health care that emphasizes community development, health education, and effective interventions in areas such as nutrition and human waste disposal should be explored further.

E. Integration of USAID-Funded Activities Into Population Project and National Health System

1. Progress and Problems

The USAID-funded project is an integral component of the larger population project which, in turn, is part of a larger and steadily expanding

primary health care system. The 20-province project will accelerate the national expansion of the program. The RTG is committed to this goal. Despite certain organizational and logistical problems, communication and cooperation between the parties involved in coordinating the various inputs during the project period have been good. There is clear evidence as well that appropriate resources are being allocated in increasing amounts to rural areas where health and medical care needs are critical.

2. Recommendations

The evaluation team recommends the following:

- As Thailand prepares its strategy for primary health care (see the Fifth Five-Year Plan (1982-1986), it should encourage further USAID participation and possible USAID/World Bank support of RTG program goals and activities.

Future Project Development

The evaluation team acknowledged the critical need for further development of the primary health care system. Training programs for personnel, efforts to strengthen management and supervisory capabilities, and the construction of additional needed facilities should continue. The team recommended that priority needs in community health receive special attention and that development of the primary health care system take place in the context of community development.

Malnutrition of preschool children, drug distribution and supply problems, and data collection, analysis, and use should receive special attention. Failure to select such priority areas will probably lead to the dispersion (and eventually the inefficient use) of resources.

Further development of the primary health care strategy in the context of community development is critical. Primary health care services are designed to improve village life and should be integrated with other services available to rural communities to achieve the desired or expected impact. An effective strategy to coordinate primary health care activities with agricultural, economic development, and educational programs should be adopted.

III. INTRODUCTION AND BACKGROUND

Country Health and Health System Profile

The Kingdom of Thailand is a constitutional monarchy. Occupying 514,000 square kilometers (200,000 square miles) in continental Southeast Asia, it is bordered by Malaysia to the south, Kampuchea (Cambodia) to the southeast, Laos to the east and northeast, and Burma to the north and west. The environmental, demographic, and socioeconomic conditions of each of the four natural geographical regions--North, Northeast, Central, and South--differ.

The 1977 population was approximately 44 million, the annual growth rate, 2.5 percent, and the average population density, 84 persons per square kilometer. Most Thais (over 80 percent) live in rural villages. Rice farming is the predominant occupation. More than 95 percent of Thailand's inhabitants are Buddhist. As a whole, the country is socially, culturally, and linguistically homogeneous.

More than 5 million people live in Bangkok, the capital city. No other city has more than 100,000 residents. The country is divided into 72 provinces, each with a central municipality ("amphur muang"), 7-10 rural districts ("amphurs"), and sometimes subdistricts ("king tambons"). The districts are further divided into townshops ("tambons") and the townships into villages ("mubans"). There are approximately 670 districts and subdistricts, 51,000 townships, and 48,000 villages. Provincial governors, appointed by the Ministry of the Interior, are responsible for all public sector activities in each province. District chiefs, appointed by the governor, represent the government's peripheral administrative unit. Town and village leaders are chosen by members of their communities.

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, vector-borne, and other infectious diseases, many of which are directly related to inadequate environmental sanitation; and various nutritional deficiencies. The leading causes of death are:

--accidents and violence

--infant diseases;

--tuberculosis;

--gastroenteritis and colitis;

--pneumonia;

--heart diseases;

--malaria;

--diseases of pregnancy and the puerperium;

--diseases of the stomach and duodenum; and,

--dysentery.

In 1977, the crude birth rate was 35 per 1,000; the crude death rate, 9 per 1,000; the infant mortality rate was approximately 89 per 1,000; and the maternal mortality rate, 4 per 1,000. The life expectancy at birth was 58. The total fertility rate (TFR) was 4.8. Forty-five percent of the population was under 14 in 1977; 52 percent was aged 15-64; and 3 percent, 65 or older.

Both the private and public sectors provide health and medical services. The public sector is primarily the responsibility of the MOPH, although several other ministries and government-supported university medical centers contribute services. Health and medical care in the provinces is provided under a pyramidal system paralleling the administrative structure described above. The provincial chief medical officer heads the provincial health office and is responsible for all provincial health care activities. A provincial hospital (200-700 beds) is located in each provincial capital, with district hospitals, district health centers, tambon health centers, and village midwifery centers completing the MOPH rural health care infrastructure.

In 1977, there were 92 provincial hospitals with approximately 50,000 beds. In addition, there were 288 district hospitals and health centers serving 676 districts and subdistricts; 3,720 tambon health centers serving 5,100 tambons; and 1,456 midwifery centers serving 48,000 villages.

Recently, the delivery of government health services to villages and tambons has been severely hampered. The too few health facilities are poorly located; there are not enough appropriately trained personnel; and competition from the "unofficial" private sector (traditional healers, injectionists, druggists) is strong. As in many other developing countries, personnel, facilities, and other resources become more scarce as one moves from the municipalities to the rural areas. Several studies in the early 1970s indicated that less than 20 percent of the rural population used annually any government health care facility.

The private health care sector is active but difficult to describe specifically. Private expenditures for health and medical care are at least three times as great as public expenditures. The private sector includes private hospitals and private physicians' clinics. "After-hours" private practice by all levels of MOPH employees is widespread. The ready availability of non-prescription drugs and pharmaceuticals fosters the work of unofficial practitioners in the private sector.

Description of the Population Project

Between 1970, when it was founded, and 1977, Thailand's National Family Planning Program (NFPP) successfully reduced the population growth rate from 3.0 percent to 2.5 percent. By the start of the government's Fourth Five-Year National Economic and Social Development Plan (1977), over 30 percent of all eligible women of reproductive age were practicing contraception. The inadequate delivery of services, not lack of demand, prevented further increases in the rate of family planning acceptance.

In 1977, 20 densely populated provinces in which both family planning acceptance and rural health facility coverage were well below national levels were identified. (See Table 2.) These provinces, targeted for accelerated family planning and health service development, are the primary focus of a major new population project. (See Appendix A.) This project, a $68.6 million multi-donor undertaking, will assist the RTG in reducing the rate of population growth from 2.5 percent (FY 1977) to 2.1 percent (FY 1981) and maternal and infant mortality by 50 percent by 1981. The World Bank (IDA), Australia, Canada (CIDA), Norway, the United States (USAID), and the Royal Thai Government are supporting the project. (See Table 3.)

The project's goals are to:

--expand the MOPH rural health care infrastructure;

--increase the number and quality of paramedical workers in rural areas;

--introduce new types of volunteer health and family planning workers to villages;

--stimulate increased community support and demand for family planning services; and,

--improve the management, supervisory, evaluative, and research capabilities of the MOPH.

Thailand's Fourth Five-Year Plan (1977-1981) places special emphasis on the nationwide provision of primary care, which is defined as integrated basic curative and preventive health services which emphasize self-help and community development. The primary health care program described in the plan aims to improve the health of the rural population by:

--reducing population growth;

--improving the health infrastructure;

Table 2

AFPH PROVINCES
(By Region)

North	Northeast
Kamphaeng Phet	Buriram
Lamphun	Maha Sarakham
Nakhon Sawan	Nong Khai
Petchabun	Roi-et
Phichit	Si Sa Ket
Phitsanulok	Surin
Sukhothai	Udon Thani
Central	**South**
Kanchanaburi	Nakhon Si Thammarat
Nakorn Pathom	Songkhla
Prachin Buri	
Suphan Buri	

Table 3

POPULATION PROJECT 1978-1981
(Support in US $ Millions)

Donor Agency	Grants	Loans
IDA	$ -	$30.0
CIDA (Canada)	0.1	6.2
ADAB (Australia)	3.0	-
Norway	3.1	-
USAID	-	5.6
	$6.2	$41.8

All External Support	$48.0 (70%)
Royal Thai Government	$20.6 (30%)
Total	$68.6

--improving general medical care;

--increasing MCH services;

--improving nutritional status;

--reducing environmental health hazards;

--controlling communicable diseases;

--creating a new category of voluntary village health workers; and,

--strengthening national health planning.

The Population Project (or 20-Province AFPH Project), funded from FY 1979 through FY 1981, is entirely consonant with the MOPH's five-year, 1977-1981, goals and objectives. The project includes two major sets of components, national and provincial. The national components will aid the further expansion of the family planning service network. Training facilities will be built and selected paramedical workers trained; audiovisual and transportation equipment, contraceptive supplies, technical assistance, and support for operating costs will be provided. The provincial components, specifically intended for the 20 project provinces, include construction and upgrading of rural health facilities, provision of vehicles and audiovisual equipment, support for basic and in-service training, funding of operational costs and salary support for various rural health personnel (see staff projections, Appendix B), and support for planning, evaluation, and research activities.

Description of USAID Rural Primary Health Care Expansion Project

The Rural Primary Health Care Expansion Project (Primary Care Expansion Project), funded by a three-year $5,500,000 loan from USAID, is a discrete but integrated component of the larger multi-donor population project described above. The primary purpose of this sub-project is to make primary health care services more accessible to the rural population in the 20 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; and improving the health program evaluation and research capabilities of MOPH and provincial staff. Short-term training for rural health manpower; long-term assistance in developing the health planning, evaluation, and research capabilities of the MOPH; and funding for specific evaluation and research activities conducted or coordinated by MOPH staff will be emphasized.

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

--village health communicators and village health volunteers (basic training);

--primary care paramedicals, including nurse practitioners and tambon-level auxiliary midwives and junior sanitarians (in-service training) and assistant health workers (basic training);

--primary health care supervisors at district and provincial levels (in-service training); and,

--administrators and planners at district and provincial levels (in-service 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.

IV. EVALUATION STRATEGY

Purpose of Evaluation

In accordance with the proposed plans and in compliance with the terms of the project loan agreement, an interim evaluation was made to determine how effectively, efficiently, and successfully the specific goals and objectives of the project were achieved. The scope of work included:

--evaluation of effectiveness and appropriateness of project training;

--assessment of appropriateness of project research and evaluation activities;

--efficiency and effectiveness of management practices;

--availability of government pharmaceutical supplies in rural areas;

--administration and technical supervision and support of project personnel;

--assessment of improvements in rural immunization, environmental sanitation, preventive health care, and other medical services that have been made available to the rural populace as a result of the project;

--use and effectiveness of nurse practitioners, auxiliary midwives, health assistants, volunteers, communicators, tambon trainers, and administrative personnel trained under the project;

--assessment of deployment patterns used by administrators;

--increased use of rural health services resulting from the project; and,

--assessment of USAID-sponsored effort as part of total project effort.

USAID/Thailand emphasized that this interim evaluation would provide an opportunity not only to assess project progress, but also to note specific areas deserving further examination and review by in-country personnel; contribute formative ideas to help strengthen the current program; and identify possible alternative strategies to strengthen project ends.

Participants in the Evaluation

The three-member evaluation team included:

- Michael M. Stewart, M.D., M.P.H., Team Leader
  Associate Professor of Medicine
  Chief, Division of General Internal Medicine
  Director, Office of Primary Care Education
  Faculty of Medicine, Columbia University,
  New York, New York

- Ann T. Brownlee, Ph.D., Evaluation and Planning Coordinator
  Project for Strengthening Health Delivery Systems
  in West and Central Africa
  Health Policy Institute
  Boston University, Boston, Massachusetts

- Constance A. Freydig, M.A., M.P.H., Director of Health Education
  San Luis Obispo County Health Department,
  San Luis Obispo, California

Dr. Stewart is an internist with a special interest in public health, community medicine, and primary care education. His international experience includes four years in Thailand as a field staff member of the Rockefeller Foundation and as a faculty member at the Ramathibodi Hospital Faculty of Medicine.

Dr. Brownlee is a medical sociologist with special interest in health services research, training, and evaluation in developing countries. While at Boston University, Dr. Brownlee designed a field guide to identify and use important social and cultural information in cross-cultural community health work. She is working now on planning, evaluation, and health services research studies, part of a regional project for strengthening health delivery systems in Central and West Africa.

Ms. Freydig is a health education specialist interested in community health education and the training of indigenous health workers. She spent four years in Uganda as a WHO health education specialist.

Methodology

The evaluation team was briefed in Washington, D.C., by APHA and AID/W staff. Project documents were made available for review. The team spent three weeks in-country (Dr. Brownlee arrived and left one week after the others). The evaluation was conducted in three phases, each approximately

one week long. The first phase included a MOPH/USAID briefing with a World Bank evaluation team; a detailed review of available documents; and the preliminary analysis and identification of problems. During the second phase, the team visited five of the 20 project provinces: it was accompanied by MOPH, USAID, and World Bank staff. Final activities included preparation of a report describing progress and problems and consultations with MOPH, USAID, and World Bank officials to discuss findings.

Time constraints were severe; the team could visit no more than five provinces. Neither of the two southern provinces was visited. Visits were made, however, to the central, northern, and northeastern regions.

The simultaneous reviews by USAID and World Bank staff and the opportunity to participate in several joint briefings underscored the integration of the USAID-funded component into the larger and more complex population project. The agendas of the two evaluation teams were sufficiently different that separate work schedules were usually followed.

The interim evaluation team was to have included RTG counterparts, but a decision was made locally not to follow this plan. Instead, government officials were asked to provide informally the necessary assistance and access to information. The evaluation team did not prefer this approach, given the complexity of the project and the short preparation time available. However, the assistance and contributions of MOPH officials and USAID staff were useful.

The team reviewed documents and data, held briefings and interviews, and made field observations. The strategy for the interim evaluation called for a comparison of the original project plans with current activities and accomplishments; an assessment of progress, problems, and changes in program plans; and the preparation of recommendations on the strategy for completing remaining activities and expanding the project. USAID-funded training, management, and evaluation and research activities in the 20 provinces were emphasized. (See Appendix C.)

Recommendations

In the future, government officials should be asked to participate formally in the evaluation as members of the evaluation team. External consultants and in-country participants should be given sufficient time to review appropriate materials and prepare preliminary agendas, work schedules, and evaluation instruments. The evaluation process should begin with a meeting of the participants to determine what areas should be evaluated; the greatest emphasis should be on areas in which evaluation findings are likely to influence program decision making during the project period.

The health component of the proposed Fifth Five-Year Plan should be made available in early 1981 and translated into English for the evaluation

team. The team should review thoroughly this document before beginning the final evaluation. An RTG co-team leader and other RTG counterparts should be asked to join the evaluation team. If practical, MOPH officials involved in the current evaluation and representatives of DTEC, NESDB, and the Ministry of Finance and/or Bureau of the Budget should be asked to participate. Every attempt should be made to ensure that policy makers and decision makers will be available for consultations with the evaluation team.

Appropriate documents and data should be made available. Priority areas in which related activities and projects could be conducted should be identified. Field visits to provinces outside the project area should be made whenever possible. The specialist consultants comprising the AID component of the evaluation team should attempt to develop a draft evaluation instrument prior to arrival in Thailand, and during the first few days in country, this instrument should be refined and the work strategy and plan agreed upon by members of the joint RTG/AID evaluation team.

V. ASSESSMENT OF PROJECT STATUS AND RECOMMENDATIONS

Short-Term Training

To extend and improve the delivery of rural health services in 20 of the most underserved provinces of Thailand, villagers are being enlisted in the system. They will help make primary care more accessible physically and culturally. Nearly 100,000 persons will work for the extended system that will deliver primary health care to 12 million villagers living in over 18,000 villages throughout the 20 provinces.

Training activity targets are almost 80 percent on schedule. (See Appendix D-1.) A layered training program has been set up for village health communicators (VHCs) and village health volunteers (VHVs) at the village (muban) level, and for a new category of health assistants (HAs) at tambon, district, and provincial levels. Auxiliary midwives and junior sanitarians at the tambon level ("tambon trainers") train and supervise VHCs and VHVs. These tambon trainers receive special training to perform their additional tasks. District and provincial doctors, nurses, and sanitarians take courses on the training and supervision of the tambon trainers.

VHC and VHV Training

A. Progress and Problems

1. Selection

The VHCs are selected after the primary health care supervisors and deputy district health officers have explained the program, including the roles of VHCs and VHVs. A sociometric method* is used in selecting VHCs. Certain VHCs are selected for VHV training.

Each village has one volunteer who heads a team of 5-10 communicators, each of whom serves 8-15 families, depending on the size of the village. Although both sexes are equally eligible, more men than women (70-30) have been selected as VHCs and VHVs. The goal is to train 79,655 communicators and 7,965 volunteers before the project ends. At mid-point, 46,546 communicators and 4,678 volunteers had been trained.

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* The sociometric method requires a house-by-house survey to determine prevalent communication patterns between households; it is used to identify those to whom others most frequently turn for advice.

2. Responsibilities

The VHCs are concerned primarily with information, education, and communication (IEC). They informally discuss with neighbors and relatives MCH, FP, nutrition, important communicable diseases, sanitation, and other basic health topics. They promote participation in local IEC events, such as film showings or mass immunization programs, and encourage people to use the health services available in their area. They work closely with VHVs. On busy clinic days at midwifery centers, VHCs may help weigh and measure babies.

THe VHVs provide minor health care, dispense drugs and contraceptives, organize local IEC events, provide basic health education, assist in vector control programs, especially for malaria, and participate in programs to prevent endemic diseases such as hookworm. Volunteers also refer patients with more serious health problems to the nearest appropriate health facility; serve as members of the village health communicator group; and act as a liaison between government officials and villagers.

An official activity log book, distributed to the district for use by VHVs, lists 11 items, such as number of patients seen, number of visits made, and number of medications dispensed. The log does not specifically include home visits, IEC events, or community meetings, although there is adequate space to record such information. The log has not been given to all VHVs and is used erratically. It is widely believed that VHVs have good memories and that supervising midwives can record oral reports accurately. Some people have suggested that unpaid volunteers should not be expected to keep written records. Recordkeeping is not part of VHV training.

3. Course Content and Methodology

VHCs take a five-day course from tambon trainers (auxiliary midwives, junior sanitarians, and other tambon health staff). Primary health care and health services are explained, and 35 problem-solving training manuals are used to introduce such topics as nutrition, family planning, and MCH. (See Appendix D-2.) The VHCs are taught how to use these modules and how to conduct simple needs surveys to determine which learning modules will be most useful when conducting specific health education activities in the villages. (See Appendix D-3.)

The VHVs, who must be able to read and write, take an additional 15-day course (six hours per day). This course, also given by tambon trainers, introduces 17 additional modules on curative care. All 52 modules have been revised (larger print, more illustrations) and bound as a single manual. (See Appendix D-4.)

VHCs and VHVs are usually trained in their own villages in a school, Wat (Buddhist temple), or meeting hall. Teachers of both courses combine lectures and demonstrations, and hold question-and-answer sessions at the end of each day, time permitting. Continuing education is limited to supervisory visits for tambon midwives and/or sanitarians. There is no fixed plan for periodic refresher training. VHVs in the field want to learn more about curative medicine and community development.

4. Supervision

In Nakorn Pathom Province, tambon trainers make supervisory visits to the volunteers once a week and receive verbal reports on VHC and VHV activities. Some VHVs keep careful records of the clinical care they provide. The volunteers meet with their communicators once a month and prepare a report, usually verbal, on activities. They may note the number of contacts made and meetings held. The tambon trainers attend these meetings. They also attempt to learn directly from villagers whether and how they feel they have been helped by their communicators. The medical director of a district hospital in Phitsanulok Province said there is little incentive for tambon midwives and/or sanitarians to make VHV supervisory visits because the voucher system instituted to reimburse travel expenses and per diem is not working. Furthermore, transportation is difficult because there are not enough vehicles.

In a remote village of 500 residents in Surin Province, the midwife visits the VHV once a month, primarily to renew the supply of contraceptives. The midwife for another village, in Buri Ram Province, assigns a month's work to the VHV and answers questions about medications. Clearly, each tambon trainer takes a different approach.

5. Evaluation of Training

A systematic evaluation of VHC and VHV training has not yet been made. A proposal to study the appropriateness and quality of VHC/VHV relationships with individuals seeking care was submitted by the Health Planning Division to USAID and was approved for funding in February 1980.* The Health Training Division is also involved in a UNFPA-sponsored evaluation of VHC/VHV training in project and non-population project provinces.

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* "Performance Evaluation of Village Health Volunteers (VHVs) and Village Health Communicators (VHCs) in the Twenty Provinces Population Project"

The information made available to the evaluation team is limited to field observations in five of the 20 project provinces. The indications are that community participation in and use of health services have increased. Sanitation has improved.

Tambon, in Phitsanulok Province, VHVs and VHCs are organizing volunteer labor and helping to build a child nutrition center.

Although an "unofficial" medical care system has been operating in villages for a long time, simple medical care is now available to the villagers of a remote village in Surin Province for the first time. The value of this new service was pointed out in many of the villages the team visited. In Buri Ram, the PCMO noted that the medical care provided to villagers by VHVs is better than none. Villagers previously treated themselves, with the assistance of traditional healers, who charge three or four times the cost of the drugs dispensed.

The midwife at the Jorakemak Tambon Midwifery Center, in Buri Ram Province, reported increased use of both curative and preventive services. More under-1-year-olds are being immunized; more pregnant women are receiving the tetanus toxoid vaccines; and health education programs in nutrition, sanitation, and the complications of vaccinations are increasing.

Between 80 percent and 90 percent of the households in a remote village in Surin Province now have latrines; before the VHV/VHC program, there were almost none. Given the cost of a complete waterseal latrine (more than ฿500), this is a noteworthy accomplishment.

At Nongkaen Tambon Health Center, the VHC assembles villagers for educational sessions on boiling water, then follows up in the village. The villagers are keeping their houses, including kitchens, clean and are learning to care properly for themselves.

These anecdotes illustrate some of the VHVs' activities. Two particular issues should be examined further as the national program for VHCs and VHVs expands. One, how much additional curative care should VHVs be trained and encouraged to provide? The danger of stressing too strongly the curative role is already apparent. Two, should program targets and preventive and promotive activities of village volunteers be set for an entire area, or should each village specify its own priorities? It is not clear that priorities and targets are being set at all in many places.

B. Recommendations

1. VHC and VHV Selection Process

The VHC/VHV selection process and the application of the sociometric method vary considerably. It is somewhat surprising to find that VHCs are often young persons who, ordinarily, are not at the hub of a village

communication network. Since the VHC is being proposed as a permanent worker throughout the country, the selection process and recruitment of replacements should be scrutinized. The methods used to select VHVs who are included in the group of VHCs also vary considerably. The VHV's role is more involved, time-consuming, and structurally significant than that of the VHC. An effort must be made to find and support the best people for this position while assuring the villagers' participation in the selection process.

2. Continuing Education

Triage and referral are potentially the most important VHV activities, and they require clinical refresher training. Recordkeeping will become increasingly important; activities must be documented and objective data recorded for evaluative purposes. VHVs must learn how to maintain activity log books and use written patient referral forms. Continuing education in other areas, such as IEC and community development, should be provided. Community surveys should be made to determine local needs. The survey forms should be updated to reflect current priorities and targets.

3. Incentives

VHVs initially receive a medical kit with ฿500 worth of medications. They are expected to sell these drugs and to use the income to replenish their supplies. They may or may not make a small profit. VHVs give away medications to friends and must then either purchase more drugs with their own money, or do without. The medication kit is not a consistent incentive. VHVs also receive free medical care at district and provincial hospitals, and some have received bicycles from UNICEF.

The issues of incentives and volunteerism are interesting and complex. VHVs often have many other community responsibilities, and trends in the rural primary care system suggest that VHVs will be expected to play a greater role in the system in the future. Alternative incentives, such as government stipends, community donations, graded rewards for activities accomplished, educational opportunities, etc., should be studied and offered.

4. Community Development

One of the most challenging tasks facing those responsible for rural primary health care is determining the appropriate role of VHCs and VHVs in the community development process. This may involve working with agricultural extension workers, community development workers, the tambon

council, or a variety of other groups. More than the provision of simple curative and preventive medical care is required.

It is not clear to what degree the MOPH, through its rural primary health care system, can or should take the lead in promoting community development activities. A strategy to make health care delivery a component of community development must be designed and implemented carefully; it has been amply demonstrated in many traditional societies that the acceptance of innovative health practices depends on an effective community development program that encourages villagers to identify their own needs and priorities.

Tambon Trainers

A. Progress and Problems

1. Responsibilities

Each auxiliary midwife and junior sanitarian at the tambon level is responsible for organizing a village health volunteer and health communicator program in one village (muban) each year. To prepare for their roles as trainers and technical supervisors, the workers enroll in a five-day course for tambon trainers. Community resources channeled through VHVs and VHCs are used to approach and solve the health problems of villagers. Traditional practices and medicines may be used, and the Buddhist temple (Wat) and Buddhist monks involved as well. The project goal is to train 3,484 auxiliary midwives and junior sanitarians as tambon trainers during the three-year project period (FY 1979 through FY 1981). As of December 31, 1979, 2,938 workers had been trained.

2. Course Content and Methodology

The five-day course for tambon trainers is given in provincial capitals. Primary health care (PHC) supervisors and deputy district health officers instruct them in the essentials of PHC and its extension to remote villages; training techniques are emphasized strongly. The instructors introduce the PHC concept, which covers community participation; health problems; health service coverage; the role(s) of rural health staff in dealing with community health problems; selection and role(s) of VHCs and VHVs; trainer instruction; and instruction in the use of training materials prepared by the MOPH health training, nursing, family health, health education, rural health, and communicable disease control divisions. (See Appendix D-5.)

3. Supervision

Supervision of the VHVs and VHCs is primarily the responsibility of tambon midwives and sanitarians, although district and provincial health staff sometimes provide direct supervision. No standard protocols for supervision have been instituted, except for the recordkeeping log book. The most common method of supervision requires monthly field visits by the midwife or sanitarian, who receives oral reports from VHVs on the number of patients seen, kinds of illnesses treated, and number and result of meetings with VHCs. Any written records are checked; drug and contraceptive supplies replenished; questions about curative care answered; and special work assignments, such as simple household surveys, made.

4. Evaluation

Two evaluations of the tambon training course are being made now. The first, an evaluation of course materials, is being conducted by a team from the Department of Technical and Economic Cooperation (DTEC) and UNICEF. Course materials fall into two categories: booklets (4-5) on primary health care implementation, or trainer modules (7). Data collection is almost complete. The second, a performance evaluation of tambon trainers, is being conducted by a MOPH health training team supported by UNFPA. This evaluation will be completed in December 1980. Both evaluations teams are making a random sample of all provinces in the nation, including four of the 20 project provinces. Their results will be published in a single volume.

B. Recommendations

1. Training

The five-day tambon training course was recently incorporated into the basic training course for junior sanitarians. The tambon training course may also be included in the basic training program for auxiliary midwives. (This decision is pending.) At this level, educational resources can be used efficiently, but the training instruction itself may not be effective because the trainees have little work experience.

2. Continuing Education

Continuing, regularly scheduled in-service education in administration, IEC and community development, supervision, and standardized recordkeeping and referral processes is needed for tambon trainers. The

need for continuing education may vary from one location to another. This, and the effective provision of education at a manageable cost should be determined.

Nurse Practitioners

A. Progress and Problems

1. Recruitment

Since 1973, Mahidol University has offered qualified nurses a one-year nurse practitioner training course in public health and clinical and administrative skills. The MOPH has undertaken to train 900 rural area nurses, including 200 from the 20 project provinces, in the program. These nurses will be assigned to district facilities, particularly district health centers and district hospitals which have no physicians. The long-term goal is to place NPs in every district facility in the country. As of December 31, 1979, 321 nurse practitioners had been trained. The project provinces had been given priority when nurses were selected for the training program, but difficulties in releasing nurses from their duties have slowed the training schedule in these areas, with less than 100 having been trained to date.

2. Responsibilities

NPs provide direct patient care and supervise the medical care and other duties of auxiliary staff at district hospitals and health centers. Where a doctor is also present, the NP assumes senior clinical responsibility in his/her absence. A NP also heads the nursing division at a district hospital, plays an active part in public health activities, and is expected to be actively involved in the clinical supervision of tambon paramedicals.

3. Course Content and Methodology

The curriculum was reviewed and revised three years ago to make it more community oriented. It is hoped that NPs will become active in the tambons (e.g., participate in tambon and VHV training). Trainees learn how to make differential diagnoses, handle emergencies and minor surgical procedures, treat minor illnesses, manage abnormal deliveries and perform episiotomies, carry out MCH and family planning services, including IUD insertions, participate in the administration of services, and supervise all personnel and operations when no physician is present.

Nurses already trained in public health (PHNs) take a six-month course in medical care and administration. Registered nurses (RNs) with no background in public health enroll in a one-year course that includes public health. Both PHNs and RNs are required to complete 10 weeks of field training in provincial and district hospitals, and the one-week course on teaching methodology, given by the Training Division at the Mahidol University School of Public Health in Bangkok.

4. Supervision

NPs are supervised primarily by district hospital physicians. The evaluation team did not observe the supervision of NPs at facilities without physicians.

B. General Comments

NPs are a highly trained, especially competent group. Officials are concerned about their tendency to move upward in the system, to the provincial hospital level, to settings where their clinical skills can be used more fully. No quantitative information indicating such a trend is available.

The evaluation team, which met few NPs, could identify no notable deficiencies in NP performance or use in the field. The Faculty of Public Health is now conducting a two-year study of 300 NP graduates who have been working in the field at least one year. A careful performance evaluation of a subsample of 60 NPs, 15 from each major geographic region, will be made; this evaluation will require site visits, field observations, and record reviews. In addition to NP performance, the study will address task assignments, acceptance by patients and supervisors, management support, and NP deployment and physicians' costs.

C. Recommendations

1. Supervision

Given the NPs' broad range of responsibilities, one can assume that district facilities without physicians have great difficulty supervising regularly the clinical care tambon paramedicals provide. A special effort should be made to monitor closely the deployment pattern, assignment of responsibilities, work satisfaction, compensation levels, and job mobility of NPs assigned to project provinces.

2. Recordkeeping

An analysis of the patient care activities and of the clinical records of NPs in district hospitals where physicians are also assigned may provide useful information on the problems and clinical activities of auxiliary midwives (AMWs).

Auxiliary Midwives (AMWs)

A. Progress and Problems

In the past, one barrier to greater use of health and midwifery centers was the inability of paramedicals at these facilities to provide acceptable symptomatic and curative services to meet local needs and demands. One project target is to upgrade the basic medical care skills of 2,250 AMWs. As of December 31, 1979, 1,055 AMWs had been trained.

1. Responsibilities

The new clinical skills and functions of the AMWs include minor surgical procedures and treatment of wounds and accidents; curative services for common diseases, such as respiratory infections and diarrhea; simple laboratory services; identification of more serious conditions; emergency care; referrals to physicians; clinical recordkeeping; and training, supervision, and support of primary health care workers, village health volunteers, and communicators.

2. Course Content and Methodology

All AMWs and some sanitarians assigned to health and midwifery centers in the 20 project provinces are required to take a special four-month course in curative care. Priority is given to AMWs because they play a greater role than junior sanitarians in patient care. The training program consists of one month of didactic teaching and three months of practical training. (The five-day tambon training course may be incorporated into this program; the decision is pending.) The course is conducted in 14 training institutions, including three MCH centers, seven nursing colleges, and four practical nursing schools. Manuals are distributed to all training institutions, and to all former trainees who have returned to their posts. The evaluation team could not review these manuals, which are in Thai, but noted their presence in the field.

3. Supervision

Physicians and/or nurse practitioners from the nearest district hospital supervise the medical care AMWs provide. Efforts will be made to coordinate this supervision with the DDHO's supervision of AMWs' activities in which village volunteers participate. In the 20 provinces, there is a shortage of nurse practitioners able to provide clinical supervision, and some district hospitals and many district health centers lack physicians. Moreover, physicians at district hospitals are extremely busy; because regular field supervision of AMWs is difficult, some physicians assign it low priority.

B. General Comments

AMWs observed in the field are managing a large number of clinical cases, as many as 70-75 patients on busy days. The patient mix includes a number of potentially seriously ill persons, including infants with pneumonia; these patients are diagnosed clinically and treated empirically. All AMWs who were interviewed favorably reviewed the four-month course in curative care. Some frankly acknowledged that they had been managing similar patients in the past but now could do so with greater assurance. No protocols for diagnosis, treatment, or referral were evident, however, and no formal patient follow-up system was noted.

Cases are grouped into at least four categories: minor problems managed entirely by the AMW; serious but non-emergency cases requiring initial treatment by an AMW and referral to a physician; emergencies requiring AMW intervention and immediate referral to a district hospital; and patients with chronic diseases or infections referred by physicians for on-going AMW care. The evaluation team was unable to ascertain how consistently this system is used and how (if at all) carefully it is monitored. These considerations have important implications for the supervisory system. The recordkeeping system for clinical patient contacts requires only a notation of diagnosis and treatment; a description of symptoms, the patient's history, and physical findings are not required.

AMWs are trained to provide more sophisticated medical care and to work intensively with village volunteers to provide preventive, promotive, family planning, and other services. Several PCMOs were concerned that increased demand for curative care might preclude effective extension work in the villages. Several AMWs at midwifery centers said that the assignment of health assistants (HAs) has prevented this (the team was unable to document the claim), and it is a problem in the tambons. For example, one AMW was averaging 35-40 clinical contacts per day, seven days a week; understandably, she is accomplishing little work in the village.

C. Recommendations

AMWs (and some sanitarians) are now the key physician-extenders in the 20 provinces. The quality of their medical care must be monitored appropriately, documented, and supervised. The MOPH is aware of the danger of overemphasizing curative activities at the expense of preventive care. Nevertheless, the care that is being provided should meet defined standards of quality. The use of simple written guidelines or protocols for clinical decision making and referral should be required. Simple but creatively written guidelines would be useful in setting standards and documenting services; they would also facilitate supervision.

Health Assistants

A. HAs for Midwifery Centers

1. Recruitment

A class of junior paramedicals, recruited locally, is made up of unmarried women, aged 18-25, with a grade 10 education or higher; these women are otherwise eligible for basic training as auxiliary midwives or practical nurse/midwives. As they prove their capability, they are upgraded to auxiliary midwives or practical nurse/midwives. By the end of the project, 740 HAs will have been trained for midwifery centers in the 20 project provinces. As of December 31, 1979, 564 had been trained. (See Appendix D-1.)

2. Responsibilities

HAs prepare clinical equipment; visit homes to follow-up MCH patients and family planning acceptors; make periodic contacts with VHVs to replenish supplies of drugs and contraceptives; provide first-aid services in the absence of a midwife; issue second-cycle contraceptives; assist with recordkeeping and routine reporting; and maintain the midwifery centers.

3. Course Content and Methodology

The training course, conducted by nurse instructors and doctors, lasts six weeks. The class spends two weeks in the classroom, and receives four weeks of practical training at the MCH centers in Chiang Mai, Khon Kaen, and Ratchburi. Heavy emphasis is placed on MCH and family planning; nutrition, first-aid, communicable disease control, minor treatments, use of basic drugs,

recordkeeping, health education, environmental sanitation, and Thailand's rural health system are also covered. Small-group or individual sessions in clinical training are held in various hospitals and rural health facilities.

B. MCH/Family Planning HAs

1. Recruitment

These HAs are recruited from the group of 20-40-year-old women, natives of the district, who have a grade 10 education or higher, a pre-existing interest in family planning, and an ability to get along with people. The project is supporting the training of 500 HAs, with priority given to the 181 who will be assigned to the 20 project provinces. As of December 31, 1979, 308 HAs had been trained. (See Appendix D-1.)

2. Responsibilities

HAs help to set up and operate family planning clinics; dispense condoms and oral contraceptives; engage in face-to-face IEC activities in clinics and maternity wards; maintain family planning records; and monitor dropouts.

3. Course Content and Methodology

Two weeks of classroom training and two weeks of practical training at MCH centers are provided. Classroom instruction includes a study of FP programs and policies, population problems, human reproduction, contraceptive methods, history-taking, clinic operations, instrument sterilization, basic MCH, IEC (especially face-to-face communication), use of simple audiovisual aids, recordkeeping, referral systems, and roles of other health workers.

Curriculum lesson plans and manuals were revised in December 1979 by former trainees from the three MCH centers and divisions assisting the Health Training Division, Family Health Division, and Rural Health Division. Lectures are infrequent, experiential learning emphasized. The revised curriculum, lesson plans, and manuals will be used for the six-week HA course. (A recently completed study of HAs was useful to the curriculum revision committee.

4. Supervision

Supervision of HAs is the responsibility of auxiliary midwives at the midwifery centers and of supervisory staff at the district and provincial health facilities where HAs are posted.

5. Evaluation

An evaluation of the effectiveness of the HA training program, a special Health Planning Division project involving a small sample of HAs in various regions, revealed that HA training is generally effective. However, a review of the data collection instruments and a description of the study suggest that little attention is given to actual performance evaluation. Nonetheless, the results (the findings are not available in English) were apparently useful in modifying the curriculum.

C. General Comments

The evaluation team noted that HAs in several locations have been integrated appropriately into the health care system. Hospital-based HAs perform a variety of light duties, such as helping in the pharmacy. Midwifery center HAs fill in for the AMW when she is working in the villages. HAs' clinical training is rudimentary, however, and should be monitored and upgraded by their immediate supervisors. Since they are well educated, HAs should be able to learn quickly and become a valuable permanent addition to the health manpower pool, even though their total numbers will be small.

D. Recommendations

Originally conceived to meet the demand for manpower (there was a shortage of PNs and MWs), HAs receive limited training. Apparently, they work only in the 20 project provinces. The use of HAs in other provinces might meet the demand for additional primary care manpower, at least until more PNs and MWs are trained. The career development and upward mobility of HAs should be addressed. Additional training will be required to upgrade HAs to the level of PNs, MWs, or AMWs.

Many personnel at many levels in the primary health care system are upgrading their skills or enrolling in basic training programs. Continuing education and refresher courses in curative care for paramedical workers should be provided. Refresher training should concentrate on high-priority learning needs (determined by objective data and ascertained by paramedicals performing routine tasks).

Efforts should be made to improve paramedicals' competence to conduct IEC activities and to stimulate them to participate in specific community development activities. The Health Training Division, Rural Health Division, and the IEC Project should collaborate on an appropriate PHC strategy that emphasizes IEC.

Special studies and research projects on specific categories of health personnel should be closely coordinated with Health Training Division projects. This work should begin during the initial research design phase.

Future analyses of training effectiveness should include actual performance evaluations of former trainees. Practical methods for performance evaluations should be used routinely throughout the primary care system.

Village health volunteers should have adequate incentives to maintain their critically important role in the expanding system.

Village health volunteers should be retrained periodically in the appropriate use of medications, especially new drugs.

Career development opportunities for recently trained health assistants should be provided.

Curative care provided by recently trained auxiliary midwives and nurse practitioners should be monitored by their immediate supervisors. The supervisors should monitor and evaluate the quality of the care provided and frequently review the information recorded.

Management and Supervision

A. Progress and Problems

Full implementation of the Rural Primary Health Care Expansion Project in the 20 provinces will require the effective coordination and supervision of a large number of health care personnel working at many different levels in the provincial primary care delivery system.

The key levels of operational responsibility are:

- Tambon Health Services

  The tambon trainers (midwives and junior sanitarians) must oversee the work of village volunteers and communicators, health assistants and, in some cases, practical nurses.

- District Health Services

- The administrative and technical (medical care) supervision of midwives and sanitarians is the responsibility of the DHO or DDHO, physician or nurse practitioner, or chief of health promotion at the district hospital.

- Provincial Health Office

  A primary health care supervisor (a senior public health nurse) is responsible for the overall supervision of the tambon and village primary care networks.

Key management and administrative personnel are the PCMO and section chiefs in the PHO and the various DHOs and district hospital physician-directors. These persons have the greatest degree of authority and control over resources and operations. PHO and DHO staffs have had little to no formal management training, although they usually have had much more in-service training experience than line personnel below the district level.

The original training plan for supervisory personnel and administrators included a variety of short five-day to four-week courses. The objectives, which were unrealistic, were to help supervisors and administrators understand how the expanded delivery network works and to upgrade supervisory and management skills at every level of the system.

Several new positions were created: primary health care supervisor, health educator, epidemiologist, and statistician (provincial level); deputy district health officer, nurse practitioner, and assistant health worker (tambon level). Two of the new positions, PHC supervisor and DDHO, were assigned direct-line supervisory responsibilities. Training for these positions, conducted separately for each group by the Health Training Division, was completed by the end of FY 1979. Two hundred DDHOs have been trained and posted. Several were interviewed during the evaluation team's field visits. All had a clear understanding of their role. Many are sanitarians with considerable experience at the tambon level.

Although they have completed the initial four-week training program, PHC supervisors have not been posted to all 20 project provinces; some have been transferred elsewhere. The team was unable to determine whether in-service training is being considered or planned for other PHO staff who will replace those originally trained for positions as PHC supervisors.

The evaluation team observed that several supervisors had been assigned responsibilities (e.g., planning, health promotion, or health education and training) usually reserved for PHO section chiefs. This raises two questions: Is the budget sufficient to support full-time PHC supervisors? Can a part-time supervisor effectively perform his duties? The assignment of multiple duties is a recurrent problem in the MOPH; it underscores budgetary inadequacies, the difficulty the MOPH has in identifying and recruiting appropriately trained people for certain positions, and frequent personnel absences and rapid turnover, particularly in rural areas. It is not uncommon to find senior-level personnel with more than one title. The team was unable to determine whether and in what way this problem is compromising the supervisors' ability to oversee and support the extended PHC network. It is obvious, however, that a supervisor must travel extensively to supervise effectively the large number of service facilities and personnel in any one province.

The relationship of the PHC supervisor to the DDHOs who have day-to-day responsibility for administrative (non-medical) supervision of tambon paramedical staff and volunteer networks should be examined. The system limits the number of supervisees at each level to ensure manageability. But

this system is not fully operational, and senior personnel cannot assume that supervisory levels are fixed. Frequent contact and dynamic interaction between junior and senior personnel (e.g., PHC supervisor and provincial DDHOs) are necessary to solve unanticipated problems, mediate disputes, oversee supervision, and carry out other development tasks.

The evaluation team was unable to determine how the two supervisory levels work together to strengthen supervision and to enhance the anticipated outputs of the tambons and villages. Additional in-service management training for each group would be particularly useful now, given the operational problems and constraints. Team training in actual field problems would be most useful. This "vertical team" training should include DDHOs and tambon paramedicals who superv e VHC/VHV workers, if the MOPH considers this level of supervisory interaction essential. The "vertical team" of supervisors should interact at the district level with a "horizontal team" that includes the DDHO, the physician or nurse practitioner of the district hospital, and the chief of health promotion.

The administrative relationship between DDHOs and tambon paramedicals is problematic for two reasons. First, adequate resources (per diem and travel) are not always readily available. If out-of-pocket expenses are not reimbursed, field supervision will be neglected and serious problems result. Second, the MOPH realized early in the project that DDHOs are not qualified to provide medical supervision and back-up support for paramedicals. Consequently, physicians and nurse practitioners at district hospitals must supervise clinical work at the tambon health centers and coordinate the activity with the DDHO responsible for administrative supervision. District hospital physicians' interest in and commitment to non-hospital primary care varies; besides, many are too busy at the hospital and cannot arrange regular field visits. Moreover, not all district hospitals have nurse practitioners to whom this task can be delegated, and those who are available also have heavy on-site responsibilities which make regular field supervision impossible.

A concerned physician and/or nurse practitioner will provide substantial clinical supervision when circumstances permit, but neither can provide the consistent and effective supervision desired. If the travel and per diem budget can be increased, reimbursement expedited, nurse practitioners assigned to every district hospital, responsibilities and tasks clarified, etc., the problem can be solved. The next challenge will be for DHO and hospital staff to set common goals and to work as a team jointly supervising primary care at tambon and lower levels.

Skills in program planning and management must be upgraded, and personnel management, communication, and leadership improved to make the expanded primary health care system effective. A plan for in-service management and supervisory training for a district supervisory team was proposed but never implemented. It would be appropriate and prudent to provide such limited training soon. The effort would be useful in defining learning

needs and objectives and in determining whether these are idiosyncratic or generic to the system. A small-scale program would underscore the urgent need for an expanded training program for district and supervisory teams.

Original plans included separate (one-week) training sessions for all PCMOs, section chiefs, provincial and district hospital administrators, and district health officers. Few of these training sessions have been held; an effort to revise completely the plans began over a year ago. These training experiences are the responsibility of the Health Planning Division of the MOPH, which has undertaken a broad-gauged educational needs assessment, the systematic delineation of priority management tasks and related priority learning areas, and production of curriculum materials on personnel management, programming, logistics (supplies), finance, construction, and communications. Some of these materials have been published, but not in English. It is not known when the materials will be completed. There is no schedule for specific training exercises.

MOPH provincial administrators throughout the country, not just in the 20 provinces, have been targeted for training. The preferred learning mode will be on-the-job training rather than classroom exercises.

It is unlikely that serious management training efforts will begin before the three-year project ends. Many now believe that the initial proposal was too ambitious and unwieldy, and unlikely to effect significant behavioral changes because training sessions were too short. Even though the original plan cannot be implemented as proposed, a serious attempt should be made to identify and respond to the management training needs of senior provincial health officers. For example, inexperienced and unsophisticated persons are assigned to PHO chiefs of health planning as "epidemiologists" and "statisticians." The supervisors are burdened with a considerable number of routine reports. Training in personnel and data management would help improve staff ability to do routine work efficiently and to participate in the provincial program evaluations.

The Health Planning Division could organize on-site in-service training for PHOs that addresses actual operational problems. This would probably generate new ideas and case studies for management training of health planning chiefs in other PHOs. Such an activity, conducted on a small scale, would shift the concept of management from theory to practice and would be more likely to effect behavioral change. The issue is not that the HPD should hold on-site management consultations with each senior administrator in each province, but that in designing a satisfactory management training curriculum, selected field training exercises in data management, supply and procurement procedures, and budgeting and finance should be conducted. The PHOs should be considered learning laboratories for management trainees who wish to upgrade their skills. Selective, rather than systemwide, activities could be initiated soon.

The management and supervisory skills of tambon health center midwives and sanitarians responsible for supervising village health volunteers and communicators should be upgraded. Some tambon center midwives know how to develop a productive supervisory and supporting relationship with VHVs and VHCs; others have no idea how to do this and make only perfunctory visits to collect data on VHV and VHC activities and to answer questions. The refresher and in-service training needs of tambon health center staff should be addressed and an assessment of management and supervision needs made. The HPD plans to design a methodology and instructional materials for training in supervision and management.

B. Recommendations

Team management and team supervisory training for provincial and district staff should be provided during the remainder of the project period. This training, if conducted on a small scale in the immediate future, will provide information useful in preparing the curriculum for the national management training program.

Particular emphasis should be placed on data management and information flow at all levels of the provincial health care system to ensure that available data are used appropriately in local management decision making and entered into the data reporting system.

The strategy to strengthen all planning and program evaluation efforts in the project provinces should include specifically-targeted management training for the health planning sections of PHOs, with special attention being given to data management (collection, processing, analysis).

To strengthen the health care system infrastructure and increase use at the periphery, special attention should be given to the assignment of management responsibilities and the need for management training for district and tambon personnel responsible for supervising and extending services to the villages.

Evaluation and Research

A. Progress and Problems

1. Proposed Evaluation and Research Activities

The project paper for the Thailand Rural Primary Health Care Expansion Project (AID-DLC/P-2285) designates the Health Planning Division (under the Office of the Deputy Undersecretary of State for Planning and Evaluation, in the Ministry of Public Health) as the major beneficiary of efforts to strengthen RTG health program research and evaluation capabilities.

These activities will strengthen the HPD's coordinating capability with existing data systems (e.g., NFPP, PMIS) and improve planning and monitoring activities in the 20 provinces. Selected operational and evaluation studies will be designed and implemented. Studies will be made on:

--health facilities and manpower use;

--volunteer and communicator training;

--training of VHVs and VHCs;

--patient/household surveys;

--operational performances of nurse practitioners, auxiliary midwives, and health assistants;

--operational performances of volunteers and communicators;

--volunteer and communicator motivation.

--project effectiveness; and,

--use of audiovisual materials (Health Education Division).

The proposed three-year budget for planning, research, and evaluation activities was $846,000. That figure can be broken down as follows:

HPD Technical Assistance	
One Full-time Three-year Health Care Planning Research and Evaluation Specialist (consultant)	$186,000
One Full-time Research or Administrative Assistant	$ 36,000
One Full-time Bilingual Secretary	$ 18,000
Short-term Technical Consultants	$ 90,000
Research and Evaluation	
Special Studies (equipment and supplies for operational and evaluation studies in 20 provinces)	$516,000

2. Current Status of Activities

a. HPD Staffing

Evaluation and research activities were implemented at a significantly slower pace than were other project activities, partly because of the difficulty in locating and hiring an appropriate long-term evaluation and research consultant. Much time was lost negotiating with a candidate who later turned down the position for personal reasons. In November 1979, Dr. Michael Maurier was hired. In the four months he has been working he has done remarkably well in involving himself in HPD activities, and he is now an effective resource, strengthening research and evaluation capabilities within the HPD and assisting staff who are trying to coordinate more effectively and expand research and evaluation activities.

The original budget called for one administrative assistant and a secretary, but the proposed salaries were much higher than Civil Service regulations allow. USAID/Thailand, in deciding to stay within the guidelines, expanded the number and altered the focus of the positions. Khun Narin Tima, training coordinator, was recruited from the Training Division; Khun Kanongyuth Kanchanakul, seconded by the HPD, became the evaluation and research coordinator. Khun Narin has a secretary, and a secretary is budgeted for Dr. Michael Maurier and Khun Kanongyuth. The four positions are funded with the amount originally budgeted for the administrative assistant and secretary.

The decision to stay within the RTG salary guidelines was wise; government staff expressed displeasure when higher salaries were budgeted for previous USAID-funded project positions. In adhering to the policy, however, USAID/Thailand has had difficulty finding help for Dr. Maurier and Khun Kanongyuth, who are sharing a secretary. Their work efficiency is hampered by the lack of an experienced bilingual secretary. The training coordinator, well versed in the training methodology and MOPH training system, is actively involved in policy and curriculum development, training, and supervisory activities, and spends much time in the field in the 20 provinces. The evaluation and research coordinator is also involved in coordinating project activities and plans to assist in the development of research activities for the provinces and districts.

Three research assistants have been hired as short-term consultants to work on project-supported studies. Thai officials have been hesitant to use consultant loan money to employ short-term, highly-paid expatriates, but agreed that use of some of these funds to employ nationals as research assistants is appropriate.

The research assistants are inexperienced and help HPD professionals to design and direct project studies. They have taken over the time-consuming data tabulation and analysis usually required of senior staff who still must design and administer the studies. This is sometimes difficult to do because the demands on senior staff are great.

b. AID Evaluation and Research Program Policies

AID provided a low-interest loan, payable over a 40-year period. The interest rate is not high (2 percent during the 10-year grace period and 3 percent thereafter, for 30 years, or until repayment is completed). Because AID made a loan, not a grant, RTG officials are hesitant to use the funds and more often use those provided "free" by other donor agencies.

USAID and HPD officials have disagreed about the research design and budgeting. The awarding of honoraria continues to be an issue. MOPH officials want to offer honoraria to MOPH and university personnel involved in the projects. Certain donors have made it a practice to give extra compensation to officials who, in addition to performing their assigned duties, take on a task not required or described in their project description. USAID maintains that the awarding of honoraria to personnel already working within the system (and to the group within it, i.e., the MOPH) constitutes "double pay," which is not allowable under USAID or RTG regulations. USAID's ruling against the inclusion of honoraria in the budget has caused dissatisfaction among and lessened the incentive of MOPH personnel to apply for and play an active part in AID-funded research projects.

The issue underscores the differing values of the two groups involved. The donor agency, on the one hand, is primarily concerned with institutional development that meets its own and host government regulations. The recipient group, on the other hand, is concerned with maximizing financial and organizational security within a system that pays low basic salaries because resources are limited. Clearly, the arguments of both sides are convincing. Because the decision against use of honoraria has caused such a significant slowdown in the research component of the project, it is essential that AID and HPD find a mutually acceptable solution to this problem in the very near future.

The use of universities and other non-government organizations and private sector individuals hired to help the MOPH implement its research or conduct its own studies has also caused problems. Given its own limited manpower, the HPD considers acceptable the use of outsiders to design and administrate studies. USAID, however, contends that because the objective is to strengthen MOPH and particularly Health Planning Division capabilities in research and evaluation, project studies should not be subcontracted. USAID officials hope that the appointment of research assistants will alleviate certain time and staffing constraints. The HPD's ability to administer a much larger research program is questionable, given current staffing patterns and activity and the lack of incentives to participate in MOPH projects.

It would be useful for AID and HPD to rethink this issue. Experience in many parts of the developing world indicate that ministries of health often lack the adequate resources, technical expertise and, staff time needed to carry out independently extensive programs in applied health services research. Discussions on strategies to develop health services research programs in developing countries usually conclude that collaborative efforts between government ministries, research institutions, and universities should be encouraged and that it is somewhat unrealistic to expect a ministry faced with a very limited budget and difficult challenges in the area of service delivery to develop within its own organizational structure the type of applied research capability that is needed. While it may be realistic to worry that university-based research

groups may tend to skew research efforts in favor of their own academic interests and without regard for practical questions, it should be possible to design a collaboration strategy that adequately meets the needs of both groups.

c. Research and Evaluation Studies (Planned and Implemented)

Three approved studies have already begun:

- "Evaluation of Effectiveness of Training Program in the Population Project's Provinces"

  This $44,495 (฿ 889,900) study on health assistant training programs (four- to six-week courses) and on the four-month training program for midwives and junior health workers, began in June 1979 and will be completed by December 1980. The study design includes an analysis of general background and course materials; a survey of trainers, trainees, other workers, and clients; and classroom and field observation.

- "Community Household Survey on Health Condition, Using Health Services Resources and Relationships Between Users and Health Personnel in Community"

  A $40,160 (฿ 803,200) study of a random sample of households in the 20 provinces began in July 1979 and will be completed in July 1980. A standard survey instrument is used to determine respondents' characteristics and reported health status, health-related perceptions and attitudes, and reported practices in relationship to health services use and expenditure.

- "Performance Evaluation of Village Health Volunteers (VHVs) and Village Health Communicators (VHCs) in the 20 Provinces Population Project"

  This study will produce a personal characteristics profile for a representative sample of VHVs and VHCs in the project and a community characteristics profile for villages served by them. The study, which costs $24,000 (฿ 480,000), began in March 1980 and will be completed by October. It includes objective measures of the VHVs' and VHCs' on-the-job performance, and cross-analyzes the perceived differences in VHVs' and VHCs' performances, using such criteria as personnel characteristics, type of training received, frequency of supervision, community characteristics, community support, and availability of government supplies.

The first two studies are well underway, although somewhat behind schedule. HPD staff and outside observers believe they are too ambitious in scope, requiring considerably greater staffing input than was originally intended.

The training study focuses primarily on the use of questionnaires, tests, curricula, and other written materials; trainee performance will be observed and evaluated. An analysis of the results of a study on health assistants has been completed. The recommendations included in the study were considered when course curricula were revised for use in later training programs.

The household survey involves the use of questionnaires in interviews with a random sample of households in the 20 provinces. Medical examinations to assess health status will not be required. A decision was made not to do a follow-up study, because staff felt that changes in community health status could not be measured in the interval between surveys.

The performance evaluation of VHVs and VHCs was revised several times at the request of USAID. The final version of the proposal describes a quite useful study. The plans for well designed data collection instruments are nearly complete. The study will focus on performance rather than the attitudinal and perceptual changes of VHVs and VHCs. It is organized to facilitate comparisons of workers' backgrounds, training, and other characteristics. The evaluation of their performance should yield results that will be useful in selecting and training future health workers. Further refinement of the study design is recommended. (See section on recommendations.)

Only $108,655 has been allocated to the three approved studies, although $516,000 was budgeted initially; over $400,000 remain unspent. The funding and execution of the evaluation and research studies are behind schedule. An effort should be made to resolve some of the problems that continue to hamper this part of the program. Interested health professionals, both at the national and local level, should be identified to carry out additional small-scale studies on health service delivery problems. Such studies may be used to improve the program design.

d. Training in Health Services Research and Evaluation

The MOPH has carried out certain limited short-term training activities to sensitize health professionals to the importance of health services research, evaluation for decision making purposes, and methodologies appropriate to these activities. Thus far, MOPH policy on training in health services research has not been finalized, nor has a major research program been designed. It is questionable whether intensive workshops on research methodology are most appropriate at this stage. It may be wise to determine first what additional skills are needed and what methods should be used to provide staff with a wider perspective on primary health care and community

and economic development. The rationale is that health workers who are aware of problems will be able to address the important research and evaluation questions and to adopt an integrated approach to health and development. The second phase of training should involve the acquisition of specific skills in research design and data manipulation.

Training in health services research methodology has required one-on-one sessions involving the evaluation and research consultant and HPD and other MOPH personnel who need assistance in designing the protocol and research methodology. The HPD plans to solicit proposals and offer proposal development and technical assistance to interested personnel in the provinces. Detailed plans for this activity are still being prepared.

The evaluation team believes that practical short-term training in proposal design and applied research is essential. If the demand for such training is met, the design, execution, and use of well focused research and evaluation will be facilitated.

e. Proposed AID-Funded Activities

HPD officials believe that several additional studies can be designed and executed as part of the project. These studies must be small in scale and require limited manpower, skills, and resources. The three ambitious studies described above have exhausted much of the Division's available resources. Studies on the collection and use of health service data, a multisectoral approach to provincial- and district-level health care, and alternative solutions to specific problems in nutrition, water supply, snaitation, and health education have been recommended.

The HPD has decided to actively encourage and provide technical support for research activities initiated by personnel in the provinces. There has been little response to requests for written research proposals and ideas. MOPH staff who are actively involved in the planning and delivery of health care in the provinces and who want to do research should be encouraged and supported. The project could support such activity.

f. Mechanisms for Coordinating Health Services Research, Evaluation, and Planning Activities

Effective mechanisms for coordinating evaluation and research activities and for using information in the health planning process are needed. In 1970, WHO initiated a planning, management, and information system project to improve the MOPH's capability in national health planning and administration. Planning at the national and provincial level was further systematized, a central information center and several provincial information centers were established, and work on information subsystems began. To be

more effective, the MOPH information-gathering and planning system must be streamlined and decentralized. The government bureaucracy is complex, influenced by numerous factors, and not amenable to quick changes.

The HPD, the coordinator for MOPH planning, research, and evaluation activities, has tried to coordinated health services evaluation and research activities using various mechanisms. With the assistance of the evaluation and research consultant, the HPD prepared Guidelines for Health Services Research (January 1980). This document is not only an important policy statement; it also describes a standard administrative mechanism for encouraging and supporting relevant health services research. The HPD prepared also a proposal on the creation of a national health development institute that would coordinate health policy development and implementation, promote and support health services research at national and provincial levels, provide training in health planning and management, and ensure technical cooperation among developing countries. It has already begun activities in these areas.

An interministry committee on primary health care was appointed recently; a new primary health care division will be created and controlled by the Undersecretary's Office. There should be more opportunities to collaborate on research and program evaluation projects when the division is fully operational, and its staff should be able to make important contributions to research. Unfortunately, the creation of the division increases the complexity of the MOPH and diffuses authority.

Both the ministry and donors acknowledge the urgent need for coordinated health services research, evaluation, and planning.

B. Recommendations

1. HPD Staffing

The HPD and USAID should examine the staffing pattern and workload of the division to determine its ability to conduct project-supported evaluation and research activities. Additional staff may be needed. The HPD believes that top priority should be given to the effective scheduling of staff assignments.

During the remaining 15 months of the project, additional temporary research assistants should be employed to conduct national-, provincial-, or district-level studies. One fully qualified research professional should be hired to supervise the extra studies and to oversee the proposed research development assistance program designed for the provinces and districts. If these new activities prove "cost-effective"--that is, if they contributed program planning--the RTG should consider retaining the new staff.

2. AID Evaluation and Research Program Policies

AID and HPD should try to provide appropriate, legal incentives for ministry personnel who may be reluctant to participate in project-supported evaluation and research activities that will increase their workloads. The lack of incentives is one of the major reasons the research and evaluation component of the project has not progressed rapidly. A concerted effort should be made to determine what arrangements are actually within the bounds of "normal" practice, and care taken not to adhere too rigidly to compensation policies that may be counterproductive. This issue should be resolved as soon as possible.

The recommendation that the HPD and MOPH should be encouraged to develop their capabilities in health services research should be reexamined. The MOPH's should be able to monitor and evaluate programs without external assistance, but its collaboration with universities or other research institutes might yield more valuable research. The fear is that universities tend to control the research and skew it to meet their own needs rather than the needs of MOPH decision makers. The problem could be resolved if the MOPH and HPD could maintain control over the design and implementation of studies for which universities provide technical research assistance.

3. Research and Evaluation Studies (Planned and Implemented)

If all the data collected during the training study cannot be analyzed, the analysis of data on actual trainee and graduate on-the-job performance should be emphasized.

The decision not to follow-up the original community household survey study should be reassessed; the follow-up could yield useful data on changes in the community. If the study is repeated, fewer and less complex questions should be asked. Only those questions that require the most useful information for decision making should be asked. If the survey form is shortened, several inexpensive measures of health status should be used. For example, simple anthropometric measures to determine the prevalence of childhood malnutrition could be used. The surveys should be pilot-tested and revised until an inexpensive but informative survey suitable for wide use can be adopted.

Studies similar to the VHV/VHC study should be supported. These small-scale field studies yield useful quantifiable and objective data. Data on specific training programs for VHVs and VHCs should be collected. Also, if pre-tests show that data from log books and other reporting sheets do not reflect accurately the number and kinds of tasks performed, work performance should be further evaluated. Consideration should be given to narrowing the focus of data collection to fewer priority areas. As currently designed, this project may still be too ambitious, given time and personnel constraints. The study should be completed as soon as possible so that results can be used in ongoing VHV and VHC recruitment and training efforts. To evaluate countrywide VHV and VHC training and performance (see the UNFPA-funded "Project for Training and Follow-up Support of Peripheral and Primary Health Care Workers") and to avoid the unnecessary duplication of efforts, the HPD study team should become thoroughly familiar with the plans and activities of Health Training Division Personnel.

Research proposals (including data collection instruments and data processing protocols) and research reports should be translated into English. This will greatly assist non-Thai-speaking groups who are preparing research and evaluation plans, designing methodologies, and evaluating results. Many of the problems and misunderstandings of ministry and AID staff might have been avoided if the proposals, data collection instruments, and data processing protocols had been edited and translated into English. The HPD is seeking a grant to fund English language translation and editing services.

4. Training in Health Services Research and Evaluation

The MOPH and other national and international groups acknowledge the need for health services research training. A program should be designed and initiated as soon as possible. Areas on which research is needed should be identified and potential researchers made aware of the meaning and importance of an integrated approach to health and development.

A limited practical research training program could be initiated as an experimental project. Several in-service workshops for province and district personnel whose involvement in small-scale research and evaluation projects could have a positive impact on service delivery should be offered. One- or two-day training sessions could be provided at the place of work; these would not require the prolonged absence of the workers, and advisors could contribute useful information. The trainees would learn how to conduct simple research with important implications for health in general; how to prepare their own studies; and how to address questions or problems which they themselves have identified as important in their own work situations. The outcomes of these initial training efforts could be useful to those planning more comprehensive training programs. If possible, USAID project money should be used to cover the costs of in-service working sessions in the provinces and districts.

The evaluation and research consultant should continue to offer in-service training to individual, central-level MOPH personnel. If MOPH officials agree it would be useful, the consultant should concentrate on in-service research development and training activities in the provinces and districts.

5. Proposed AID-Funded Activities

In collaboration with the evaluation and research consultant, the HPD should identify additional priority areas for proposal development. Due to the demands of the three large studies now underway, HPD officials have indicated that further research should be narrow in scope and produce quick and useful results. Possibilities should be explored for conducting certain research activities in collaboration with other Ministry divisions or with research groups outside the MOPH.

Lists of priority topics prepared by a number of groups were summarized by the consultant after his arrival. Three such topics are described below.

- o A small-scale study of various recordkeeping procedures, data use, reporting procedures, patient referral, and information feedback in village (VHV and VHC) and tambon health centers should be made. The study should include recommendations on simple reporting and referral systems that will adequately meet real planning needs. The low literacy level and volunteer status of VHVs and VHCs should be considered when proposing reporting mechanisms. If possible, the study should be "piggy-backed" onto the VHV/VHC study already approved.

- o The policy implications of previous studies on the comparative utility of various models used to deliver primary health care should be summarized. A small-scale, follow-on study could address one or two questions about the comparative utility of alternatives with important implications for planning.

- o A study of the use and supply of drugs in villages should include the range and price of drugs available and types of dispensers involved in their sale in villages; range of drugs sold by VHVs, any problems in the handling or prescribing of drugs, and the most appropriate mix of drugs for use at this level; problems in supplying VHVs with drugs and an analysis of alternative supply schemes; and adoption of an effective scheme to supply drugs to VHVs in the future.

The HPD should be assisted in its efforts to promote and support practical research in the provinces and districts. The project consultant and coordinator could design and implement the activity; additional temporary personnel could be hired to support research activities; and USAID funds could be allocated for practical research and evaluation studies in the provinces and districts. Mechanisms to apply, select, and fund studies should be uncomplicated, and function as speedily as possible. The HPD should assist in the design and implementation of well planned, small-scale studies on priority health delivery problems.

6. Mechanisms for Coordinating Health Services Research, Evaluation, and Planning Activities

The draft research guidelines will be useful in standardizing and facilitating the process of research promotion, selection, and support. The guidelines should be finalized and implemented as soon as possible. The final version distributed throughout the provinces and districts should be abbreviated, supplying only the information health personnel need to apply

for research development assistance; simple applications for such technical assistance and funding should be attached to the document. The guidelines for acceptable research should be described fully. The document should include the types of problems and questions the research could address; priority needs; the utility and application of results; etc.

A detailed and well organized list of priority research and evaluation topics should be prepared for potential researchers, the HPD, and other MOPH groups.

The results of project-supported studies should be published and disseminated. Care should be taken to present findings so they will be useful to decision makers.

Effective mechanisms to coordinate and use health services research and evaluation are needed. Project personnel should help the MOPH design these mechanisms. The roles of MOPH evaluation and research staff should be clarified. MOPH groups involved in evaluation or research should be identified. The use of research data should be explained and encouraged.

The World Bank's "Suggested Steps for Developing an Overall Strategy for Evaluation of PHC" (February 1979) is useful. These guidelines and WHO's Guidelines for Health Programme Evaluation (HPC/DPE/78.1) and Guidelines for Evaluating a Training Programme for Health Personnel (WHO Offset Publ. No. 38, 1978) may be useful to staff who are designing an overall strategy to coordinate health services evaluations.

7. Evaluation and Research Strategy for Remainder of Project

The appropriateness of HPD involvement in USAID-sponsored research and evaluations remains an issue. The USAID and HPD should try to resolve any remaining problems and outline plans for realistic and relevant research and evaluation activities during the remainder of the project. The staff should discuss, for example, policy on honoraria and use of outside research groups; group(s) involved in project-related research and evaluation activities; additional staffing; priority areas and specific proposed studies; research assistance for staff in provinces and districts, and related training; and the dissemination and use of research and evaluation studies.

Improvement and Use of Rural Health Services Delivery System

A. Progress and Problems

The entire 20-province project is designed to expand the MOPH rural health infrastructure and outreach capability, to influence villagers' attitudes toward and understanding of health and medical care needs, and to encourage increased use of MOPH rural service facilities.

Declining population growth rate and reduced maternal and infant mortality rates are indicators of project success. Other indices of health service coverage include increases in the number of ambulatory care visits per rural inhabitant per year (expected to increase from 0.21 to 2.0 by 1981); increases in the number of children under age one immunized with DPT and BCG (by 1981, 60 percent will have been immunized against DPT; 44 percent of all children--the 1981 target--have already been immunized against BCG); an increase in the number of pregnant women receiving antenatal care (expected to increase from 43 percent to 80 percent); an increase in the number of women with professionally-attended deliveries (expected to increase from 13 percent to 40 percent); and an increase in the number of infants registered for child welfare services (expected to increase from 13 percent to 68 percent).

Complete data on the expansion and extent of health service coverage in the provinces are not available, and progress cannot be measured accurately. Ideally, the data reporting and processing system should provide an updated status report. The MOPH would use the report to determine variations by province and district, to study the relationship of health service use to number and distribution of facilities and personnel, and to identify high-risk areas where coverage should be improved. Unfortunately, the CIC is unable to use the planning, management and information system to systematically process and assess timely data.

VHVs are actively referring villagers to midwifery centers and tambon health centers; at several service points, posted statistics confirm that visits to the centers are increasing significantly. Almost all the midwives who were interviewed in the field commented on the increasing number of patients; district hospital clinics were busy all day. The indications are that facility use is increasing.

The cold chain immunization program is hampered by kerosene shortages and mechanical problems with refrigerators in tambon health centers. Many midwives and sanitarians store vaccines in the refrigerators in their homes. Due to the cold chain problems, immunization schedules must often be batched and planned well in advance; fresh vaccines must be transported in ice. Refrigeration problems aside, substantial progress in immunization targets has been made. For example, one PCMO stated that in his province, more than 60 percent of the village children had been immunized against DPT.

Government midwives in the tambons and villages are handling only a small number of deliveries. Granny midwives (traditional birth attendants) are preferred. Nonetheless, government midwives have shown that they can work well with their traditional counterparts, whom they often assist with deliveries. Antenatal care was a major activity in many service facilities; (the extent of coverage could not be determined.) Routine infant care is rare.

Given a large and dispersed rural delivery system, available resources may be insufficient and certain medical needs may not be satisfied. Some busy district hospitals, for example, function without physicians. Other, newer hospitals may have too much sophisticated equipment but not enough

trained technicians. In every location, concern about the shortage of vehicles and the inflated cost of gasoline, which was not anticipated in the budget for FY 1980, was expressed. This is a critical problem, because extensive travel is required for service delivery, health education activities, and supervision. Suitable transportation is essential to an expanded primary care network.

There is an impressive amount of activity in the primary care system. Almost all observed service points were busy; most personnel were either at work at their posts or performing specific duties in the field; village volunteers seemed active, involved, and enthusiastic.

The key to a successful expanded primary care program is the range and quality of services provided by paramedical workers, who must be adequately supervised and supported. The work of physicians is restricted primarily to curative care in larger and busier hospitals. The roles of those who have to organize, provide, and supervise care at a busy 10-bed or 30-bed hospital, as well as supervise all paramedicals delivering medical care in the district, conflict. Although physicians should not surrender either responsibility, their distinct activities should be monitored closely.

More physicians are using nurse practitioners for clinical field supervision. Most are also trying to make occasional field visits (some make regular and frequent visits). Others fulfill their supervisory responsibilities by meeting with paramedicals and conducting in-service refresher training at hospitals. Systematic quality care evaluations should be made to ensure that medical personnel are fulfilling their obligations.

A formal emergency transportation system is needed. Accidents and violence are the primary causes of morbidity and mortality. It would be helpful to know whether transportation or communication delays contribute to the death rate. A systems intervention in high-risk geographic areas or for high-risk population groups may be warranted. While emergency medical services and integrated primary health care differ both conceptually and functionally, it is logical to integrate the delivery of all episodic (unscheduled) medical care services, both major and minor, into the primary health care system.

The appropriate use of frequently dispensed drugs, particularly antibiotics, is a problem. Chloramphenicol, for example, is stocked at many paramedical service points, all of which follow different directions for its use. Similarly, gentamicin is frequently used empirically to treat suspected or possible gram-negative infections. Given the concern for both cost and atrogenesis, guidelines on the use of drugs in particular settings should be prepared. Drug distribution and supply is a systemwide problem for the MOPH. The Express Transport Organization, General Purchasing Organization, and other government enterprises do not always operate efficiently or well. Drugs and medical supplies may not be ordered correctly, delivered on time, or in complete shipments. The facilities for storing drugs, especially those requiring refrigeration, are inadequate, as is knowledge of appropriate storage techniques, etc.

Some time ago, NIDA prepared a study that addressed these problems and recommended solutions, but the report was considered less than satisfying; many of the proposed solutions involved radical and unrealistic changes in the bureaucracy. The Rural Health Division, under the direction of Dr. Uthai, has been studying these problems. Last year, a working group composed of division and GPO staff was convened. The group considered the various problems of drug supply and distribution, prepared recommendations, and published a report outlining the problems and suggested solutions. After further deliberations, the Rural Health Division issued to all provinces a circular outlining new procedures to correct some of the problems. Follow-up and supervision of activities in the provinces and elsewhere are required.

Drug distribution is still a problem. The supply of drugs to VHVs is especially difficult. No standardized distribution system is used; different methods are being tried in different areas. Obviously, an effective practice must be adopted.

Multifactorial problems, such as infant and maternal nutrition, human waste disposal, and water availability, will require more attention and resources than can be made available through the expanded primary care system. In contrast to family planning, the benefit from using expanded primary care services to resolve these complex problems is apt to be marginal. A more comrpehensive approach to community development, income generation, health education, etc., is needed. Until such an approach is adopted, primary health care will not have a significant impact on problems such as intestinal parasites, non-immunizable infections, and retarded childhood growth and development.

B. Recommendations

An on-going monitoring and evaluation system for health care and related systems is needed to ensure the effective management and assessment of activities designed to improve health status. A simple, practical, well maintained recordkeeping system should be installed, and data collected, analyzed, and used. A refined community household survey should be used periodically to measure the community's attitudes toward knowledge and use of health care services.

A practical methodology to make quality assessments using available recorded data should be designed. If quality criteria can be established and a practical methodology for monitoring deviations from accepted norms designed, district hospital physicians will be able to maintain the expected quality standards. The use of a practical quality assurance system based on objective data would also facilitate the physician's ability to supervise auxiliary personnel in the field.

Skills in emergency first-aid care should be upgraded and maintained at the highest possible level throughout the primary health care system.

Guidelines or protocols or the use of frequently dispensed drugs, particularly antibiotics, should be prepared. This activity could coincide with efforts to design and implement a practical quality assurance system.

The drug supply and distribution system should be rationalized, and appropriate methods for supplying drugs to VHVs devised. Initiation of a small research project to evaluate the effectiveness of the various models now used to supply VHVs may be useful.

A more comprehensive approach to primary health care should be adopted. The approach should emphasize community development, health education, and the use of effective intervention strategies to address such problems as nutrition, human waste disposal, etc.

The evaluation team did not study the delivery of mental health or dental services, which district and tambon delivery systems offer. The needs, use rates, and resources available to these services should be assessed.

Integration of USAID-Funded Activities into Population Project and National Health System

A. Progress and Problems

The USAID-funded project is a discrete but integral component of the larger population project, which is itself part of a larger primary health care system that is expanding throughout the country. The 20-province project is not a demonstration model; it is helping to expand nationwide a health care system to which the RTG is committed fully.

Communication and cooperation between the MOPH, USAID, and World Bank have been good; staff have been able to coordinate each organization's contributions during the project. Despite delays in facility construction and management training, for example, and technical problems (e.g., the inadequate PMI data system) that are hampering the full achievement of project objectives, dynamic progress is being made. Appropriate resources--facilities, equipment, newly trained personnel--are being allocated in increasing amounts in rural areas where health and medical care needs are most critical.

B. Recommendations

The evaluation team offered no specific recommendation on the integration of USAID-funded activities into the population project. The team did note that the participating organizations should continue to collaborate on their efforts and to maintain communication.

The government is now preparing its Fifth Five-Year Plan (FY 1982-FY 1986). It is expected to express in this document its commitment to a fully developed rural primary health care system. The government should continue to encourage the USAID and the World Bank to support its programs, goals, and activities.

VI. FUTURE PROJECT DEVELOPMENT

Thailand has embarked on a major and exciting effort to further develop and expand its system of primary health care. In the next few months, government officials will meet to prepare the Fifth Five-Year Development Plan, which will describe the strategy for continuing the efforts to expand health care nationwide.

The evaluation team has stressed the need for continued training of auxiliary workers, improved management and supervision, and additional health care facilities. In addition, it has encouraged the government to focus on programmatic priorities and personnel and facility development.

Two areas of activity should be emphasized over the next five years. The first involves the identification of priority community health needs; this includes not only training but program implementation as well. The second requires further development of the primary health care strategy in the context of community development.

Priority areas for further program development should be identified carefully. The strategy should address problems that can be adequately solved by community health measures. Although local communities must identify their own priorities, health professionals with appropriate local experience could stimulate and guide their selections.

One problem that could be addressed effectively is pre-school malnutrition, particularly in sections ~~of the country~~ where malnutrition is widespread. Special emphasis should be placed on the identification of high-risk groups, case-finding, health education, and other targeted interventions requiring special resources. The involvement of child nutrition centers in these activities should be considered.

Another problem that could be addressed is drug distribution and supply. Difficulties should be identified and addressed at all levels within the health care system. A special effort could be made to design and implement an appropriate system for supplying village health volunteers with appropriate drugs and medical supplies.

The adequate collection, timely analysis, and use of health and health service information should also receive special attention. One of the most pressing problems facing the MOPH is the lack of timely data needed for planning, management, and evaluation activities at all levels. The planning and management information system should become fully functional in the near future. Data needs and data availability should be determined and data reporting systems evaluated. The system should be simplified and streamlined to provide information critical to decision making at all levels. Various mechanisms for providing appropriate information on village VHV and VHC activities should be designed and adopted. While the immediate investment of resources in an effective data system may be costly, the longer-term benefits (knowledge, documentation, and improvement of program performance) are likely to outweigh the costs.

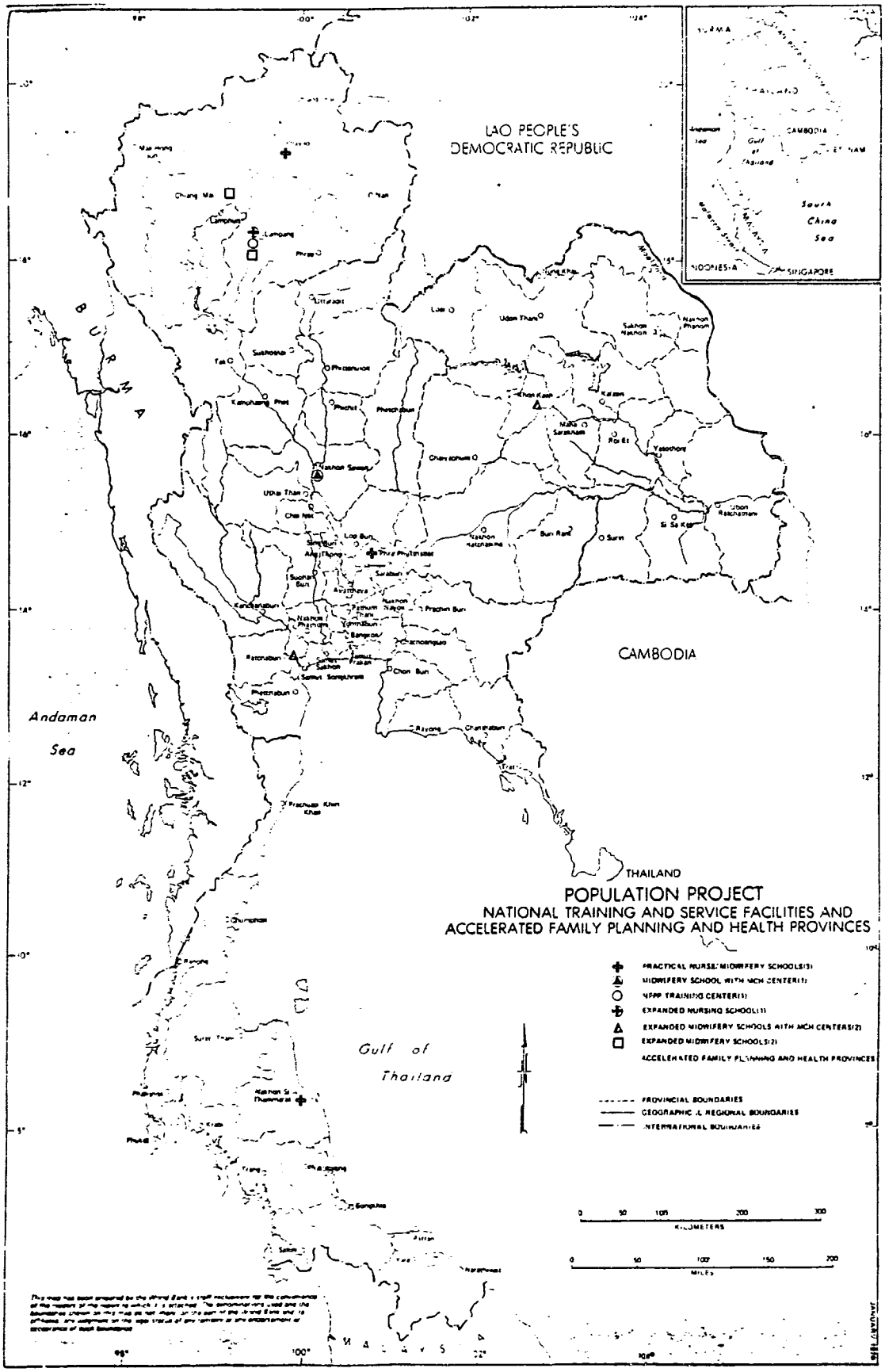
The identification of specific problems for special attention should facilitate the attainment of other goals. Failure to select these priority areas will lead to the dispersion of resources.

An effort should be made to further develop the primary health care strategy in the context of community development. Primary health care services contribute to the improvement of village life and should be maintained and integrated with other services available to rural communities. An effective strategy to coordinate village activities in primary health care with agricultural, economic development, and educational activities should be adopted.

BEST AVAILABLE DOCUMENT

Appendix A

MAP OF THAILAND INDICATING 20 PROJECT PROVINCES



Appendix B

PROJECTED RURAL HEALTH FACILITY STAFFING
(By AFPH Provinces)

Technical	MWC	THC	DH(10)	DH(30)
AMW	1	1	2	2
AHW	1		1	1
JS		1	2	2
PN/MW		1	2	6
NP			1	1
RN			2	4
MD			1	3
Senior Sanitarian			1	1
Dental Hygienist			1	2
Lab Technician			1	1
Dentist				1
Pharmacist				1
Nurse Anesthetist				1
X-Ray Technician				1
Subtotal	2	3	14	27
Non-Technical and Temporary	-	-	12	28
TOTAL	2	3	26	55

Appendix C

ITINERARY AND PRINCIPAL CONTACTS

2/25/80 Bangkok

USAID and World Bank Briefing
Mr. Henry Merrill, Director, O/HPN, USAID/Thailand
Dr. David Radel, Project Officer, World Bank
Ms. Catherine Fogle, Research Assistant, World Bank
Mr. Karl Skansing, Economist/Planner, PAFU

2/26/80 Nakorn Pathom Province

Field Visit
Dr. Surasak, PCMO, Provincial Health Office,
Dontoom District Hospital
Banlaung Tambon Health Center
Bantakdad Midwifery Center
Home Visit to Village Health Volunteer

2/28/80 Bangkok

MOPH Briefing
Mr. Karl Skansing, PAFU
Dr. David Radel, World Bank
Dr. Michael Maurier, Health Planning Division, MOPH
Dr. Kong, PAFU Administrator
Dr. Uthai, Director, Rural Health Division, Assistant Director, PAFU
Dr. Prachuab, Director, Health Education Division, Assistant Director, PAFU
Mr. Uthai, PAFU Activities Coordinator

2/28/80 Bangkok

IEC Briefing
Dr. Prachuab, Director, Health Education Division, Assistant Director, PAFU
Mr. Uthai, PAFU
Mr. Narin, PAFU Training Coordinator
Mr. Sumat, Health Education Division
Dr. David Radel, World Bank
Dr. Michael Maurier, Health Planning Division, MOPH

2/29/80 Bangkok

Training Activities Briefing
Dr. Arin, Director, Health Training Division, Assistant Director, PAFU
Dr. Kong, PAFU
Mr. Narin, PAFU
Dr. David Radel, World Bank
Mr. Henry Merrill, USAID/Thailand

Bangkok

Evaluation and Research Briefing
Dr. Yuthana, Director, Health Planning Division
Dr. Damrong, Health Planning Division
Dr. Yongyuth, Health Planning Division
Mr. Kanongyuth, PAFU Research/Evaluation Coordinator
Dr. Michael Maurier, Health Planning Division
Dr. David Radel, World Bank
Mr. Henry Merrill, USAID/Thailand

3/1/80 Bangkok

Evaluation Review, World Bank Team
Dr. David Radel, World Bank
Ms. Catherine Fogle, World Bank

3/3/80 Phitsanulok Province

Field Visit
Dr. Amnuay, Provincial Health Office, PCMO
Puthachinarat Nursing College
Banrakam District Hospital
Bangrakam District Health Office
Bungkok Tambon Health Center and Child Nutrition Center

3/4/80 Phitsanulok Province

Field Visit
Phompiram District Hospital
Phompiram District Office
Nongkaem Tambon Health Center and Child Nutrition Center

3/5/80 Srisaket Province

Field Visit
Nonpayom Village Headman and Village Health Volunteer

Payu Tambon Health Center
Khunhea District Health Office
Khunhea District Hospital
Utompon District Hospital
Elam Tambon Health Center

3/6/80 Surin Province

Field Visit
Surin Provincial Health Office
Surin Practical Nursing School
Surin Provincial Hospital
Samrongtab District Health Center
Sikorapum District Hospital
Kwawyay Tambon Health Center
Home Visit with Village

3/7/80 Buri Ram Province

Field Visit
Dr. Somkuan, Buri Ram Provincial Health Office, PCMO
Prakonchai District Hospital
Jerakemak Midwifery Center
Home Visit with Village Health Volunteer and Communicators

3/9/80 Bangkok

Evaluation Review, World Bank Team

3/10 - 3/14/80 Bangkok

Consultations and Report Preparation

3/14/80 Presentation and Discussions of Findings, USAID and MOPH

3/17 - 3/20/80 Bangkok

Report Finalization and Discussions

3/19/80 Discussion with Dr. Soonthara Pongspipat, Director, UNFPA Primary Health Care Training Project, Health Training Division, MOPH

Discussion with Dr. Supathana Dhibanuka, Division of Public Health Statistics, MOPH

3/19/80	Discussion with Dr. Tony Bennett, Family Health Division, MOPH
3/20 - 3/21/80	Final Discussion of Results with Primary Health Care Expansion Project Personnel, USAID and MOPH

Appendix D-1

POPULATION PROJECT:

TRAINING ACTIVITIES THROUGH DECEMBER 1979

Training Program	FY 1978 Target	FY 1978 Actual	FY 1979 Target	FY 1979 Actual	FY 1980 Target*	FY 1980 Actual Dec. 79	FY 1981 Target	FY 1981 Actual	TOTAL Target	TOTAL Achievement as of Dec. 31, 79
1. Health Assistants: 4 - week	41	36	270	272	192	-	-	-	500	308
6 - week	50	47	423	517	194	-	-	-	750	564
2. Nurse Practitioners: (6-12 months)	150	129	300	166	300	26	150	-	900	321
3. Teaching/Learning Process	70	65	130	154	160	133	-	-	360	352
4. Nurse Instructors (2 - month)	60	60	80	89	80	-	-	-	220	149
5. Basic Medical Care (4 - month)	350	345	730	710	820	-	350	-	2,250	1,055
6. DDHO/Supervisors	110	193	110	49	-	-	-	-	220	242
7. CNC Attendants	45	-	75	123	57	-	-	-	180	123
8. PHC - Tambon Trainers	1,428	1,342	2,056	1,596	546	-	-	-	3,484	2,938
- VHCs	20,655	18,549	29,000	27,997	33,000	-	-	-	79,655	46,546
- VHVs	1,992	1,889	2,900	2,789	3,000	-	-	-	7,892	4,678
9. Management - Chief, Planning	20	20	-	-	-	-	-	-	20	20
- Chief, Administration	-	-	40	-	40	-	-	-	40	-
- Prov/Dist, Administrators	-	-	365	-	365	-	-	-	365	-
- Chief, Promotion Section - Dist - Hosp	-	-	103	101	-	-	-	-	103	101
10. Population Awareness	60	-	60	125	90	-	-	-	180	125

* Adjusted to meet total target

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Appendix D-2

TITLES OF 52 TRAINING MODULES

The titles (in English) of the 35 training modules used in a five-day VHC course and of the 17 modules introduced in the 15-day VHW course are:

C+V	A	Public Health Problems to be Solved by Community
C+V	A1	Identification of Problems in the Village
C+V	A2	Group Activities/Community Participation
C+V	1.	Utilization of Government Public Health Facilities
C+V	2.	Utilization of Household Drugs
C+V	3.	Utilization of Traditional Herb Medicines
C+V	4.	Dressing of Fresh Wounds
C+V	5.	Assist the Persons with Fractures and Sprains
C+V	6.	Assist the Persons with Burns and Scalds
C+V	7.	Assist the Fainting Persons
C+V	8.	Assist the Persons with Convulsion
C+V	9.	Assist the Drowning Persons
C+V	10.	Assist the Persons with Snake Bites
C+V	11.	Assist the Persons Bitten by the Dogs
C+V	12.	Assist the Persons Taking in Poisons
C+V	13.	Providing Immunization Services
C+V	14.	Prevention of Tuberculosis
C+V	15.	Assist the Persons Suffering from Leprosy
C+V	16.	Potable Water and Water for Household Use
C+V	17.	Construction of Sanitary Privies (latrines)
C+V	18.	Garbage Disposal

Appendix D-2, cont.

C+V	19.	Sewage Disposal
C+V	20.	Mosquito, Fly and Cockroach Control
C+V	21.	House Mice and Rats Control
C+V	22.	Food Poisoning and Contaminated (dirty) Foods
C+V	23.	Household Improvement
C+V	24.	Vegetable Preservation
C+V	25.	Fruit Preservation
C+V	26.	Kitchen Gardening
C+V	27.	Chicken Raising
C+V	28.	Duck Raising
C+V	29.	Fish Raising (fish ponds)
C+V	30.	Pig Raising
C+V	31.	Personal Hygiene
C+V	32.	Daily Diets
C+V	33.A.	Family Planning Knowledge
V	33.B.	Oral Pills and Condoms
V	34.A.	Maternal and Child Health
V	34.B.	Postpartum Care
V	34.C.	Infant Care
C+V	35.A.	Assist Malnourished Children
C+V	35.B.	Infant Foods
C+V	35.C.	Infant Food Supplement
C+V	35.D.	Foods for Preschool Children
V	36.	Assist the Persons with Fever
V	37.	Assist the Children with Fever and with Rash and Red Dots
V	38.	Assist the Persons with Cough

Appendix D-2, Cont.

V	39.	Assist the Persons with Headache
V	40.	Assist the Persons with Back Ache, Waist Ache and Ache all over the Body
V	41.	Assist the Persons with Constipation
V	42.	Assist the Persons with Stomach Ache
V	43.	Assist the Persons with Diarrhea
V	44.	Assist the Persons with Intestinal Parasite Worms
V	45.	Assist the Persons with Boils
V	46.	Assist the Persons with Skin Diseases
V	47.	Assist the Persons with Dental Caries
V	48.	Assist the Persons with Conjunctivitis
V	49.	Assist the Persons with Ear Ache
V	50.	Assist the Persons with Beriberi
V	51.	Assist the Persons with Anemia
V	52.	Assist the Persons with Malaria

Appendix D-3

COURSE OUTLINE FOR VHC TRAINING

Curriculum for VHC: 5 days

1. Public health problems in the area and ways of examining problems
2. How to get and give information
3. How to make use of public health and other services
4. How to use home remedies and traditional medicines
5. The control and prevention of communicable diseases, especially vaccinations, tuberculosis and leprosy
6. First aid: fresh wounds, fractures, sprains, burns, scalds, fainting, convulsions, drowning, snake bites, dog bites, and poisoning
7. Sanitation: drinking water and water for household use; building of latrines; disposal of garbage and waste water; control of mosquitos, cockroaches, flies, and rats; poisonous and contaminated food, and improvement of dwellings
8. Personal hygiene
9. Nutrition
10. Family planning (general knowledge)
11. Mother and child health, including the child who does not grow at a normal rate
12. Agriculture
13. How to work in group

Duration of Training

Coverage of the entire curriculum will take about 55 hours. The training should be staggered over a period of time, at the convenience of the trainees. However, the entire curriculum should be taught in one month.

Method of Training

The method of training should be informal. Students should not be organized as a "school class." Individual or small group instruction should be provided at the convenience of the trainees.

Appendix D-3, Cont.

The topic discussed on any one day should be agreed on by the trainees and the trainer, depending on the needs of the trainees and the locality.

The trainer must stimulate the trainees to know and examine the problems and find ways of solving them.

Appendix D-4

COURSE OUTLINE FOR VHW TRAINING

Curriculum for VHW: 15 days

1. Public health problems in the area and ways of examining problems
2. How to get and give information
3. How to make use of public health and other services
4. How to use home remedies and traditional medicines
5. The control and prevention of communicable diseases, especially vaccinations, tuberculosis, and leprosy
6. First aid: fresh wounds, fractures, sprains, burns, scalds, fainting, convulsions, drowning, snake bites, dog bites, and poisoning
7. Sanitation: drinking water and water for household use; building of latrines; disposal of garbage and waste water; control of mosquitos, cockroaches, flies, and rats; poisonous and contaminated food; and improvement of dwellings.
8. Personal hygiene
9. Nutrition
10. Family planning, distribution of pills and condoms
11. Agriculture
12. How to work in groups
13. Basic medical care: the use of home remedies and other drugs decided by the Ministry of Public Health; fever, fever with rash; malaria; cough; headache; general malaise; back-ache, midriff ache; constipation; diarrhea; intestinal parasites; boils; itching rash; toothache; gingivitis; sore eyes; earache; beri-beri; anemia.

Duration of Training

Coverage of entire curriculum will take about 90 hours. The training should be staggered, and not conducted every day. During the first days of the training, the trainees should consider the health problems in the area. They should be stimulated to want to study and solve these problems.

After the introduction, the trainer and the trainees should agree on what to study next. The training should be completed in three to six months.

Appendix D-5

COURSE OUTLINE FOR TAMBON TRAINERS
(Nong Khai Province)

Date:_____, Month_____, 19_____

Date	0830-1000	1000-1100	1100-1200	1300-1400	1400-1500	1500-1630
Monday	Opening Ceremony	-VHC/VHV Project -Role of Trainers		Project Implementation in General		Role of VHC/VHV
Tuesday	Selection of VHC	Selection of VHV		Guidelines for Administration Follow-up Support, Incentives and Evaluation		Guidelines for VHC/VHV Training
Wednesday	Unit 0 Motivation Units	Unit 1 Training and Modules of Training Based On		Unit 2 Work Analysis and Decision to Get the Training		
Thursday	Unit 3 Determining Objectives and Methods of Evaluation while on Training			Unit 4 Determining Learning Activities and Planning Teaching-Learning Methods		
Friday	Unit 5 Implementation of Training	Unit 6 Support of Training and Evaluation After Completing Training of Trainers		Using of VHC/VHV Teaching Modules		- General Discussion - Closing

Appendix E

STRATEGY TO EVALUATE PHC*

1. Purpose or Objectives of Evaluation

The objectives in carrying out the evaluation can be identified. It is necessary to establish and agree on priority objectives to ensure evaluation results are used. Whose questions are to be answered should be determined. Whoever is expected to use the results must be involved in determining the objectives. It may be useful to identify the various groups (e.g., planners/managers, trainers, those involved in implementing the program including health workers, beneficiaries, community, academic researchers, funding agencies) to clarify the objectives. The evaluation questions may be different for each group. Whose interests have priority should be known at the outset.

The three evaluation objectives are:

a. To test an approach (e.g., use of different types of village health workers performing different tasks; or, more specifically, use of a particular procedure, such as routine deworming of young children to control ascaris; or use of a particular type of record card for antenatal and maternal care).

b. To assess the impact of a program on various health and development indices. This involves complex research designs; usually, results are of doubtful validity and difficult to interpret, even when carefully controlled. (This objective is not appropriate for evaluation of a national on-going program.)

c. To provide timely information useful in making adjustments and improvements when implementing an on-going program. This first step in overall strategy development involves selecting the objective that has priority in planning the evaluation program. This is especially important where resources and skills are limited. It is suggested that initially, emphasis be given to establishment of an evaluation program with the objectives outlined in c.

2. Identification of Evaluation Questions

This step involves the identification of evaluation questions. Priorities will have to be established. Many evaluation questions have

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* From the report of the First World Bank Mission, February 1979, pp. 11-12.

been identified as relevant to this PHC program (see the comprehensive list identified at the PHC evaluation workshop in Wang Keo, Rayond Province, in August 1977, as well as those identified in project documents and consultants; reports). For ease of management, it is suggested that initially, 10 priority evaluation questions be identified. Even these may not be feasible in the short-run, and further narrowing of the field may be necessary.

Suggested priority questions are:

a. Assess improvement in coverage. (This involves identifying as the denominator a target population in need of specific services (e.g., children under five years receiving regular child care and health supervision, or immunized, or pregnant women receiving antenatal care, etc.).

b. Determine relevance of program content to priority health needs (Decisions must be made on how needs are identified), community studies, or disease patterns and criteria for assessing relevance.

c. Assess use and acceptability of services.

d. Assess quality of services provided by different categories of health workers.

e. Determine adequacy of supervision and support from the MOPH.

f. Assess degree and evaluate process of community involvement.

g. Determine efficiency of service provision (e.g., work study, operations research).

3. Phase of Program to be Examined

Different phases of the program may be evaluated according to the evaluation question. For example:

- Needs Assessment
- Policy Formulation/Planning/Objective Setting
- Inputs
- Organization and Structure
- Outputs

- o Effects
- o Impact

To answer relevant questions (e.g., needs assessment may be compared with objectives and policy, with inputs (including human resources and training) and with outputs (services)). Efficiency studies would deal with inputs, organization, and outputs; utilization and acceptability, with outputs and effects, etc.

4. Information Required and Techniques Used

The information needed to assess each of the phases and the sources from which it can be obtained should now be identified. Procedures and techniques for collecting information (routine service data, observation studies of health facilities and health personnel, interviews, household surveys, etc.) is the next logical step.

5. Current Resources

Logically, available resources should be identified early in the process of developing the overall strategy because availability may influence the choice of evaluation quesitons which can feasibly be addressed. Resources available for carrying out the evaluation program include those already working in the relevant divisions and departments of the MOPH, especially assigned individuals or outside agencies.

6. Additional Resources

Additional resources required should be identified and appropriate institutional mechanisms used to implement the evaluation program.