PD-AAX-233

ISN = 54407

END OF PROJECT EVALUATION

PRIMARY HEALTH CARE II

BURMA

A Report Prepared By PRITECH Consultants:
JACK REYNOLDS
ERNEST PETRICH

During The Period:
AUGUST 10 - 28, 1987

TECHNOLOGIES FOR PRIMARY HEALTH CARE (PRITECH) PROJECT
Supported By The:
U.S. Agency For International Development
AID/DPE-5927-C-00-3083-00

AUTHORIZATION:
AID/S&T/HEA: 12/4/87
ASSGN. NO: SS 195

Acknowledgements

The Evaluation Team expresses its gratitude to all of the people associated with the PHC II project who helped us in our assignment. Our special thanks go to

Dr. U Ba Tun, Director, Public Health

Dr. U Mya Win, Deputy Director

Dr. U Thein Swe, Assistant PHC II Project Manager

Mr. Terry Barker, AID/Burma Program Officer

Dr. John Naponick, AID/Burma Health Officer

Dr. Ray Carlaw, Western Consortium Team Leader

The cooperation and hospitality we received from Department of Health and USAID staff are sincerely appreciated.

Evaluation Team Members

Jack Reynolds, Ph.D. (Team Leader), Primary Health Care Operations Research (PRICOR) and Family Planning Operations Research-Asia, Honolulu, Hawaii

Ernest Petrich, M.P.H. (PHC Management Development and Training Specialist), Vice President, Sevin Group, Inc., Chapel Hill, North Carolina

EXECUTIVE SUMMARY

1. This summary focuses on qualitative issues of priority interest: VHW performance, training, health education, supervision and management, information systems, research and evaluation, participant training, technical assistance and QCCS.

2. Quantitative achievements and details on qualitative performance are discussed in the report (see chapter 3).

3. Overall evaluation: The project met it's quantitative goals in terms of coverage and pre-service training of VHWs; but the quality of CHW performance, training, health education, supervision, information system, research and evaluation were not adequate and remain problems. Commodities were adequate but a significant amount had still not been procured by the end of the project in June, 1987. Technical assistance and participant training were delayed and constrained, and were not as effective as they could have been. AID support should continue, but the emphasis should be on improving the quality of VHW training, supervision, support and performance; and AID should continue to help the DOH develop effective information and evaluation systems.

4. VHW Performance. Coverage appears good quantitatively but varies significantly from area to area. AMW performance appears very good, CHW performance may be declining, but it is hard to judge because of the lack of reliable data and also, performance varies depending on incentives, VHW characteristics, local economies, health needs, etc. VHWs appear to continue to emphasize curative over preventive care.

   Recommendations: Concentrate on CHWs, redesign job descriptions to be based on: 1) a core set of tasks for all CHWs; and 2) optional tasks depending on local needs. Acknowledge that the CHW concept will work well in some areas but not in others (because of incentives, the economy, health needs, etc.). Identify and study options for those areas where the basic model is not viable.

5. Training has been quantitatively impressive, but uneven qualitatively. AMW training appears much stronger than CHW training for a variety of reasons: AMW selection is better, their training is task and skill-oriented, it is longer, they receive better supervision and in-service training.

Recommendations: CHW training is based on an inappropriate strategy of academic, top-down, train-the-trainers approach which dilutes curricula and methods. What is needed is a more structured, skills-oriented curriculum which is developed first and then trainers are taught to use it in training VHWs. Technical assistance will be required to design and implement this approach, and the Burmese will need to receive extensive training in this more appropriate training technology, referred to as "competency-based".

6. Health Education materials have been unavailable to VHWs, and there has been no skills training of VHWs in effectively communicating health education messages.

   Recommendations: give high priority to producing simple, reproducible, inexpensive materials for VHWs - rather than multi-color or TV materials, e.g. Provide competency-based training in health education materials development and in communications skills so that VHWs learn how to communicate health education messages.

7. Supervision and Managment remain the weakest program components. TMOs have little time for supervision and there are not enough PHS-II to supervise the CHWs. No guidelines or curricula have been developed, and no training has been conducted.

   Recommendations: provide more PHS-II's to supervise CHW's and appoint Senior HAs to supervise at the township level; conduct operations research on alternative supervision schemes, produce guidelines for township, RHC and village levels, rewrite job descriptions on supervision, design training curricula, conduct training in supervision for township, RHC and VPC officials, and evaluate results.

8. Information System development under PHC II has been inappropriate and should be discontinued. The approach is conceptually, methodologically, and technically flawed. It is also economically unfeasible.

   Recommendations: redesign the current HIS to be a decentralized (township, RHC), flexible, manual system. Provide basic training and instructions for local analysis and utilization of collected data.

9. Research and Evaluation appear to have been undertaken by a number of individuals under PHC II. Approximately 10-12 studies on relevant topics were conducted. However, only one of these could be located by the Evaluation Team, thus no assessment of their quality and utility was possible. Unfortunately, an evaluation system has still not been designed, and it is still not possible to assess the impact of the project on health, to assess VHW performance, to identify and analyze project problems or to develop and test practical solutions to operational problems. The Rapid Survey and Operations Research workshops are steps in the right direction, however.

Recommendations: Develop an evaluation system, set priorities among research and evaluation topics, provide training and technical assistance in applied research and program evaluation.

10. Participant Training. Quantitative targets were not met due to delays in processing applicants. The project was extended to permit completion of scheduled overseas training. In-country training was an acceptable alternative for courses in entomology and MCH.

Recommendations: there is a great need for advanced training in public health and support areas (supervision, training methods, research and evaluation). Unless Burma can develop an internal capability for this type of training, it will have to rely on training abroad. In-country, short courses in specific topics should be developed, but should not be considered a substitute for long-term educational development.

11. Technical Assistance encountered significant institutional resistance, but was well-received on a personal level. Because of GSRUB resistance, TA began late in the project and scopes of work of consultants were often diverted from their original purposes. Although most of the short-term consultants were qualified, some were unqualified, overly academic, and/or inappropriate for their assignments. The result was TA that was much less effective than it could have been.

Recommendations: Technical assistance is clearly needed and there is every indication that it can be effective if institutional support is forthcoming, scopes of work are relevant to project priorities and adhered to, and qualified consultants are recruited.

12. QCCS _Some additional recommendations for QCCS have emerged from this evaluation:

1. Mass media in ORT and EPI are probably not needed. A better use of these resources would be to develop and distribute health education materials to RHCs and VHWs.

2. Buy-ins to diverse AID contractors are less preferable than contracting with a limited number of consultants who could provide continued TA over the life of the project.

3. More technical assistance will be needed to develop "competency-based" training capability, and more funds will be needed to reproduce training modules and manuals.

TABLE OF CONTENTS

5. CONCLUSIONS AND RECOMMENDATIONS

ABBREVIATIONS

AID/W	Agency for International Development, Washington
AMW	Auxiliary Midwife
BHS	Basic Health Services
BPI	Burma Pharmaceutical Industry
CHP	Community Health Programme
CHW	Community Health Worker
D/S	Division/State
D/STT	Division/State Training Team
DOH	Department of Health
EPI	Expanded Programme for Immunization
FHC	Family Health Care
GSRUB	Government of the Socialist Republic of the Union of Burma
HA	Health Assistant
IMR	Infant Mortality Rate
LHV	Lady Health Visitor
MCH	Maternal and Child Health
MOH	Ministry of Health
MW	Midwife
OR	Operations Research
PHC	Primary Health Care (I and II)
PHN	Public Health Nurse
PHP	People's Health Programme
PHS	Public Health Supervisor (I and II)
PP	Project Paper
QCCS	Quality for Child Care Survival
R&E	Research and Evaluation
RHC	Rural Health Center
SRUB	Socialist Republic of the Union of Burma
TA	Technical Assistance
THHW	Ten Household Health Worker
TBA	Traditional Birth Attendant (Let-the)
THO	Township Health Officer
TMO	Township Medical Officer
UNICEF	United Nations Children's Fund
USAID	U.S. Agency for International Development, Rangoon
VBDC	Vector-borne Disease Control
VHW	Village Health Worker
VPC	Village People's Council
VTPC	Village Tract People's Council
WHO	World Health Organization

1. THE EVALUATION

1.1 Evaluation Scope of Work

The following scope of work was compiled by the Evaluation Team Leader based on cables exchanged between USAID/Rangoon and AID/W between February 20 and March 20, 1987 (#01045, 079179, 01649 and 01683) plus discussions with the USAID Health Development Officer in April, 1987. It should be noted that a final scope of work was not received by the Evaluation Team; however, it was clear that the major questions of concern to AID related to the quality of CHW training and performance, and the status of the information system. Consequently, the team focused it's assessment on those issues.

Because of scheduling problems, it was necessary to conduct the evaluation in two stages. The Team Leader visited Burma between April 24-29, primarily to attend the Western Consortium's end-of-project briefing and to discuss the project with the USAID Health Officer. The second stage of the evaluation was conducted by the Team Leader and training specialist between August 10-28. However, by that time the Western Consortium Team Leader and USAID Health Officer had left the country.

1.1.1 The Assessment

For each of the questions below, the evaluation team will provide:

- o Findings (evidence);
- o Conclusions (interpretation of the findings and best judgments based on this information; and
- o Recommendations based on these judgments.

1.1.1.1 Goal Level

What is the project's potential impact on mortality and morbidity in children under five years of age?

1.1.1.2 Purpose Level

a. Have improved VHW training curricula been developed and applied?

b. Have improved training methods been developed and applied?

c. Have improved health education materials been developed, produced and utilized?

d. Is there any evidence that this new knowledge is being applied by VHWs and the target population?

e. To what extent has the number of VHWs trained been increased (by type VHW)?

f. How many villages are now covered by trained VHWs?

g. What percentage of trained VHWs have received their initial supply kits?

h. To what extent are VHWs able to remain adequately supplied once the initial supply kit runs out?

i. Is the health information system (HIS) in operation?

j. Are reports generated being used by health planners/managers to make programmatic and strategic decisions?

k. To what extent has the disease surveillance and monitoring system at the village level been expanded? How is the information being used?

l. What progress has been made in strengthening the DOH management and supervision system?

m. How and to what extent has supervision of VHWs by Rural Health Center staff improved?

1.1.2 Methods and Procedures

The team will visit a representative number of project sites and activities, consult with project, township and other Burmese Government officials, and with local health providers involved in the program. It will also talk with Government, AID and Western Consortium officials. The evaluation will take approximately 27 days to complete.

A two-person team is suggested, consisting of an operations research/information system specialist and a training/health education specialist.

An outline of the proposed evaluation report will be due within one week and three copies of a draft report will be due at least three days prior to departure of the team. The report should not exceed 20 single-spaced pages, excluding executive summary, background and annex material. Four copies of a final written report will be due prior to the departure of the Evaluation Team Leader from Burma.

1.2 Methodology

The principal approach applied in this evaluation compared actual performance with planned performance as described in the PHC II Project Paper and Logical Framework. This involved determining to what extent project inputs were provided as planned; whether inputs were utilized as intended and processed into desired

outputs; whether the outputs in fact resulted in realizing the project purposes (effects on knowledge, attitudes and behavior); and whether the purpose was appropriate and sufficient to result in an achievement of the program goal (reduction in morbidity and mortality).

A modified systems approach was employed to carry out this evaluation. The PHC II project was divided into inputs, processes, outputs, effects and impacts. Then the questions listed in the evaluation scope of work were used to identify the most significant of these to assess (see Figure 1-1). The evaluation then concentrated on these elements, which were analyzed in two steps:

1) Quantitative achievements (inputs and outputs);

2) Qualitative performance (assessment of the subsystem processes, including identification of the factors that accounted for success or constrained performance). Finally, options for improving performance were identified.

The Evaluation Team relied on three sources of data:

1) Existing documentation, including statistics, program data, research, evaluation and consultant reports (see References).

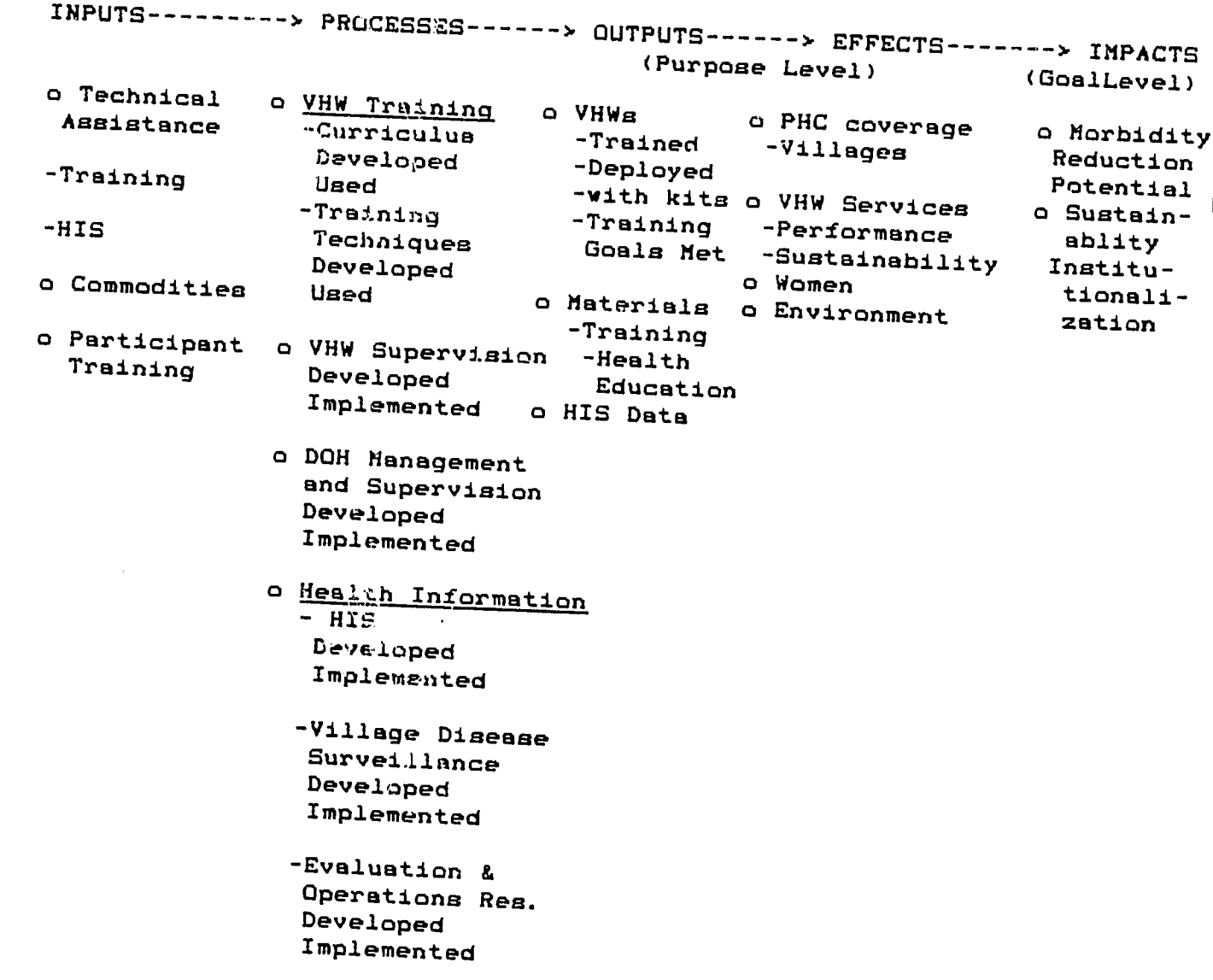
2) Meetings and discussions in Rangoon with key policymakers, program planners, administrators, donors and consultants (see Appendix F).

3) Field visits to Township and Rural Health Center staff to talk with local government health personnel responsible for implementing the People's Health Program, and to villages to observe and speak with Volunteer Health Workers who form the core of the PHC system (see Appendix F).

It must be emphasized that the team had to rely on available data, which are extremely limited, since there is no vital registration, service statistics or evaluation system and very few research projects on PHP II or PHC II. Some key documents (the CHW and Trainers' manuals, recent consultant reports, research studies) were either under review by DOH and were not available to the Evaluation Team or could not be located. The field sites visited were not representative of the country-wide program. Finally, although the Evaluation Team Leader did discuss the project with the USAID Health Officer and Western Consortium Team Leader during the first phase of the evaluation (April 24-29), both had left Burma by the time Phase II got underway (August 10-28).

Counterbalancing these limitations were the Evaluation Team Leader's familiarity with Burma and the PHP (he had been Team

Figure I: SYSTEM SCHEMATIC OF PHC II EVALUATION ISSUES



o Principal evaluation issues. The two underlined items (VHW training an Health Information are the issues of greatest interest.

Leader of the PHC I Evaluation), the extensive reports prepared by Western Consortium consultants, and the access the team was provided to key MOH staff, files and documents.

The report was prepared in an iterative manner. Issues and preliminary conclusions were discussed with DOH officials as the evaluation progressed, a draft report was prepared and discussed with DOH and USAID officials as scheduled, and the final report was completed prior to the Team Leader's departure from Burma on August 28.

2. BACKGROUND(1)

2.1 Antecedents to PHC II

The most serious health problems affecting Burma are concentrated in the vulnerable 0-5 age group and among women of child-bearing age (see Appendix C). In 1978, the Socialist Republic of the Union of Burma (SRUB) began the People's Health Programme (PHP) to reduce morbidity and mortality, especially among "infants, children, mothers, and working people." The first phase of this program ended in 1982, the second in 1986, and the third phase will conclude in 1990.

Since 1980, AID/Burma has provided commodities, technical assistance and participant training to this program through Primary Health Care I (PHC I: August 1980-March 1985) and Primary Health Care II (PHC II: August 1983-June 1987)(2). A third project, Quality Care for Child Survival (QCCS), is expected to begin shortly and will continue through 1990.

AID has been impressed with the quantitative achievements of the People's Health Programme, particularly, the recruitment, training, equiping and deployment of thousands of voluntary health workers (VHWs) and the coverage of the target population. There have been serious concerns, however, with qualitative performance, in particular the training of VHWs, their

---

(1) For additional background information, consult the PHC I End of Project Evaluation (Reynolds, et al, 1985), the PHC II Project Paper (1983) and/or the Project Paper for the Quality Care for Child Survival Project (1986).

(2) Although the project began August 19, 1983, the first technical assistance component did not get underway until May, 1985, but ended in June, 1987. Because the participant training component began late, the project has been extended until 1990 to allow the students who will begin their training in September, 1987 to complete their graduate studies.

supervision, and program monitoring through the health information system. PHC II was designed to address these concerns while maintaining support for continued expansion of the program quantitatively.

2.2 Summary of PHC I Evaluation

A mid-term evaluation of PHC II was not conducted for several reasons, including the fact that technical assistance and participant training had not even begun by mid-term. Also, the final PHC I Evaluation and a Health Sector Assessment were conducted at the mid-project point, in early 1985.

The PHC I End-of-Project Evaluation can serve as a substitute for a mid-term evaluation because of the timing, the similarity between the two projects, and the fact that it includes recommendations for PHC II(3).

PHC I, like PHC II, was designed to provide partial support to the People's Health Programme to help expand primary health care services to rural townships and villages. The overall conclusion of the evaluation was that PHC I was an effective project. Commodities and Kyat contributions were very important. Technical assistance and participant training, however, were both delayed and constrained, and were not as effective as they could have been. But quantitative achievements were impressive. Targets for pre-service and in-service training of VHWs were achieved and coverage of townships and villages with PHC was expanded. The AMWs and Let-thes were judged to be performing well, but CHWs were less effective and emphasized curative more than preventive care. Overall, it appeared that the project was having some impact on health, although this could not be measured because of the lack of data and the absence of an effective monitoring and evaluation system.

Three major problems were identified, all of which were to be addressed in PHC II. These were:

1. Training of CHWs was particularly weak;

2. Supervision and management were the weakest parts of the system;

3. Monitoring and evaluation were practically non-existent.

---

(3) The report is still relevant today. Most of the achievements, constraints and problems identified in that report are identical to those identified in the evaluation of PHC II. Due to the page limitation imposed on the PHC II evaluation report, the reader is strongly encouraged to refer to the PHC I End-of-Project Evaluation for more detail.

The evaluation report recommended that AID support for the PHP continue, but suggested five priority areas for AID assistance:

1. **VHW kits.** Provide them at the beginning of training; increase the supply of medicines; help the VHWs find ways to resupply their kits.

2. **Training.** Continue to upgrade the training system with improved curricula, modern training methods, continued training of township and RHC staff in training and supervision, more structured in-service training, and increased quantities of training materials and aids for RHCs and townships.

3. **Supervision.** Develop and implement a viable supervision system, provide training in supervisory techniques and problem analysis, particularly at the RHC and VHW levels.

4. **Information System.** Develop a decentralized information system focused on RHCs and townships. Provide training and TA in information gathering, processing and analysis.

5. **Evaluation.** Develop and implement an evaluation system that addresses priority issues: studies of the impact of the program on health, and an in-depth evaluation of the performance of VHWs.

2.3 Planned Project Inputs and Outputs for PHC II

2.3.1 Strategy

The strategy of PHC II was similar to that of PHC I, except that more emphasis was to be placed on quality. PHC II was designed to address all of the issues raised in the evaluation(4). It continued support for expansion of the People's Health Programme by providing commodities and local currency for training, equiping and deploying VHWs, but it placed special emphasis on improving the quality of VHW training, management and supervision, and the development of a viable information system and complementary applied research. AID's planned inputs included a significant amount of technical assistance and participant training as well as commodities and local currency contributions.

---

(4) The Project Paper for PHC II was signed in March, 1983, almost two years before the final PHC I evaluation was undertaken (April, 1985). However, the same problems had been identified in the PHC I mid-term evaluation, which was carried out in April, 1982.

2.3.2 Planned Project Outputs.

Outputs were grouped in three interrelated components(5):

1) **VHW Training, Supply and Deployment.** The quantitative training objectives were

	CHW	AMW	TBA	VPC
Pre-service	12,000	2,701	12,000	19,933
In-service	66,835	14,363		

CHW training was to be expanded from 3 weeks to 4. Each VHW was to receive a supply kit, including drugs, upon graduation. Expendable supplies were to be replaced, paid for with community funds.

Qualitatively, a major effort was to be made to improve training curricula and methods, with more emphasis on practice rather than lecture, and preventive measures rather than curative, covering fewer subjects, with the curricula modified as appropriate. Most important, a "revised, task-oriented curriculum for a four-week CHW training course" was to be prepared that would emphasize treatment of diarrheal diseases and nutrition surveillance of children under five.

Improved training materials and aids were to be developed and distributed to BHS staff, emphasizing environmental sanitation, nutrition, and diarrhea control. Three DOH staff were to receive training abroad in health education methods.

Finally, the State and Division Training Teams (S/DTT) were to receive additional training and the SRUB was to "establish and fund permanent positions" and a "permanent S/DTT coordinating unit" within the Training Division.

2) **Health Information System and Research.** An improved system was to be developed that would include "process" information regarding performance of "program managers, trainers and health care providers" and "impact" information regarding changes in health status of the target population.

This system was to be supplemented by "a series of special studies on both operational and technical subjects to provide the DOH with information needed to manage the program effectively.

---

(5) A fourth component, Family Health Counselling, was dropped at the insistence of the Burmese Government.

3) **DOH Management and Supervision.** The technical and management skills of DOH staff at central, Division/State, Township and RHC levels were to be upgraded through short and long-term training (both at home and abroad). Subjects were to include MCH, health system management/administration, biostatistics, epidemiology, environmental engineering, diarrheal disease control and vector control.

2.3.3 Planned Project Inputs

AID agreed to provide the necessary equipment and supplies (kits, AV equipment, a jeep, bicycles), local currency to cover VHW training costs, salaries for S/DTT staff and the coordinating unit, production of training and educational materials, costs of research projects, a nutrition office and warehouse. AID also agree to pay for participant training costs and for a fulltime Training Advisor (24 months), a Health Information Specialist (12 months), a Computer Specialist (9 months) and a Data Analyst (8 months). Table 1 shows the summary of initial and amended AID contributions.

Table 1

AID Initial and Amended Budget, PHC II
($US000)

Component	Initial Agreement	Final Revision	Difference	Percent Change
Technical Assistance	1,293	2,167	+874	+67.6
Participant Training	1,434	1,893	+459	+32.0
Commodities	6,329	5,190	-1,139	-18.0
Evaluation	200	0	-200	-100.0
Contingency	744	70	-674	-90.6
Total	10,000	9,320	-680	-6.8
Local Currency	34,000	34,000	0	0
(US$ equiv.)	4,533	4,533	0	0
Total	14,533	13,853	-680	-4.7

Source: USAID Project Paper and 8/3/87 Summary Project Financial Report.

The changes in the initial budget reflect a reprogramming of the resources originally allocated to Family Health Counselling. Funds reallocated to Technical Assistance include support for participant training at universities affiliated with the Western Consortium (TA Contractor) and two in-country training courses given in lieu of short-term participant training.

3. QUANTITATIVE ACHIEVEMENTS

This chapter describes the quantitative achievements of PHC II, focusing on the principal AID inputs (commodities, technical assistance, participant training, and local currency contributions) and the statistics for the principal project outcomes (training, health information system products, research, coverage, VHW performance, morbidity and mortality).

3.1 Project Inputs

As the following table shows, almost one-third of project funds are still uncommitted. These are primarily participant training funds, some of which will be committed over the next two years

Table 2: AID Planned and Actual Expenditures
(US$000)

Component	Budget (Obligated)	Earmarked	Committed	Uncommitted Budget	Uncommitted Percent
Technical Assistance	2,167	2,167	2,140	27	1.2
Participant Training	1,893	21	21	1,879	98.9
Commodities	5,190	5,183	4,451	739	14.2
Evaluation	0	0	0	-	-
Contingency	70	0	0	70	100.0
Total	9,320	7,372	6,613	2,708	29.1
Local Currency	34,000	34,000	34,000	0	0
(US$ equiv.)	4,533	4,533	4,533	0	0
Total	14,533	11,905	11,146	2,708	18.6

Source: USAID Project Paper and 8/3/87 Summary Project Financial Report.

for long-term training of participants scheduled to enter school this fall. A significant amount of commodities has yet to be procured (RHC medical kits, AV equipment, vehicle spare parts) and a number of procurements are still in process. Appendix D summarizes the status of commodity procurement. Approximately $3.1 million of commodities has been procured to date.

USAID plans to deobligate approximately $588,000 of project funds, which will probably be reobligated to the QCCS project.

The allocation of local currency contributions is shown in Table 3. The bulk of these funds was allocated to VHW training (travel, per diem, materials) and salary support for project staff (S/DTT, HIS, headquarters and logistics staff). Kyat funds were also used to purchase bicycles for supervisors, construct a building for the Nutrition Department, provide support for staff workshops, and to pay for surveys and studies. See Appendix F for details.

Table 3

USAID Local Currency Contributions
(Kyat 000)

Component	Planned	Actual	Difference	Percent Change
VHW Training	21,138	21,934	-797	-3.8
HIS	1,896	1,585	310	16.4
DOH Management	8,138	10,480	-2,343	-28.8
Reserve	2,278	0	-2,278	-100.0
Contingency	551	0	-551	-100.0
Total	34,000	34,000	0	0

Source: Department of Health

Technical assistance began late, but the planned personmonths had been provided by the time the project ended in June, 1987. The Long-term Advisor served as Team Leader and Training Consultant for 24 months. An additional 18 personmonths of TA in educational methods and audio-visual methods brought the total TA input in this category to 42 personmonths. The information system and research component received 37 personmonths of TA.

Table 4

Planned and Actual Technical Assistance

Category	Number of Consultants	Planned Months	Actual Months
Long Term			
Team Leader/ Training Consultant	1	24	24
Short Term			
Educational Methods	3	12	12
Audio-visual	1	6	6
Computer Specialist	1	9	9
Information Specialist	2	12	12
Data Analyst	2	8	8
Operations Research and Evaluation	3	8	8
Total	13	79	79

Source: Department of Health and USAID

Participant Training also got underway late and fell far short of it's objective, in part due to the lead time needed to identify qualified candidates. Applicants must pass a DOH technical examination and an English language test, and the DOH has had difficulty finding junior health personnel who can pass both tests. Five long-term training programs were undertaken and another four are planned for 1987-1989. Two short-term programs were completed and four more are to begin shortly.

The DOH and USAID came up with an alternative plan for in-country training, and brought professors to Rangoon to conduct: 1) a five-month entomology course for 18 malariologists; and 2) a six-week course for 30 DOH staff covering MCH, Community Organization and Evaluation Indicators.

3.2 Project Outputs

The major quantitative project outputs were the pre-service and in-service training for VHWs. Table 6 shows the figures for AID-supported training. The planned amounts were ammended from the original project targets of 8,200 CHWs, 2,700 AMWs, and 12,000 TBAs.

As these figures show, the targets were largely met. The pre-service training was completed on time, the VHWs trained were all

equipped with kits and deployed, and annual in-service training was provided to most of the CHWs and AMWs.

Table 5

Planned and Actual Participant Training

Category	Planned No.	Planned PM	Actual No.	Actual PM	Plan 87-89 No.	Plan 87-89 Pm
A. Long Term						
MPH Health Ed.	1	18	1	22	-	-
MPH MCH	3	54	2	44	2	44
MPH Epidemiology	1	18	-	-	1	22
MPH Education Sci.	2	24	2	44	-	-
PhD Health Admin	1	36	-	-	-	-
PhD Epidemiology	1	36	-	-	-	-
MSc Environ. Hlth	1	18	-	-	1	22
MSc Computer Sci.	1	18	-	-	-	-
MPH Health Admin	1	18	-	-	-	-
MPH Health Stat	1	18	-	-	-	-
Subtotal	13	258	5	110	4	88
B. Short Term						
Environmental Hlth	1	4	1	4	-	-
Health Stat/Demog	1	6	1	6	-	-
Ed. Science	6	24	-	-	2	8
MCH	6	24	-	-	2	8
Health Admin.	3	18	-	-	-	-
Subtotal	17	76	2	10	4	16
C. In-Country						
MCH	-	-	30	15	-	-
Community Org	-	-	"	15	-	-
Program Eval.	-	-	"	15	-	-
Entomology	-	-	18	90	-	-
Subtotal			108	135	-	-
Total	30	334	55	300	8	104

Sources: DOH, USAID

Table 6

Planned and Actual Pre-Service and In-Service Training

Pre-Service	Planned	Actual	Difference	Percent
CHW	12,000	11,900	100	99.2
AMW	2,701	2,691	10	99.6
TBA	12,000	10,986	1,014	91.5
VPC	19,933	18,874	1,059	94.7
Subtotal	46,634	44,451	2,183	95.3
In-Service	**Planned**	**Actual**	**Difference**	**Percent**
CHW	66,835	60,301	6,534	90.2
AMW	14,363	12,899	1,464	89.7
Subtotal	81,198	73,200	7,998	90.2
Total	127,832	117,651	10,181	92.0

Source: DOH

None of the outputs for the Information System and Research component were completed by the end of the project period, although a good deal of work was undertaken. The required inputs were provided (technical assistance, computers, workshops, some participant training, some funding of studies, support for HIS staff). A new information system was partially designed and was undergoing a field test by the end of the project. This system includes a sample household survey that could become the long-sought village surveillance system. Approximately 11 studies were undertaken, but only four were completed by the end of the project period.

There was noticeable output for the DOH management and supervision component. No supervision curriculum was developed, no training conducted, no guidelines produced, no changes made in management or supervisory practices.

3.3 Project Effects and Impacts

It is clear that PHC II did have some effects. PHC coverage was extended by the mere fact that CHWs and AMWs were deployed. Because of the lack of reliable information system, evaluation system or research data, however, it is impossible to determine: 1) what the coverage rate really is; 2) what the VHWs are actually doing after they are deployed; and 3) what effect this has had on the behavior of the target population and the reduction of morbidity and mortality. Nevertheless, the data

that are available give an indication that the project had an impact.

Coverage of the target population was increased. An additional 14,500 CHWs and AMWs were deployed, meaning that the same number of villages and urban wards now have access to a trained PHC worker. The DOH target was to cover 45 percent of villages with a VHW. Figures reported by the DOH indicate that 60 percent villages are now covered.

VHW Performance is difficult to assess because of the lack of data, but there does not seem to have been much change since the PHC I evaluation (see pp 46-49). Table 7 shows selected statistics from the DOH reporting system. They indicate that CH performance has declined in several key categories (contacts, activities with BHS, environmental sanitation) and increased in diarrhoea treatment and referrals. AMW performance appears to have improved in almost all acativities except joint activities with BHWs.

Table 7

Selected VHW Performance Indicators, 1983-1986

CHW	83/84	84/85	85/86
Ave.no.personal hlth care contacts/CHW	136	140	121
Proportion of treated diarrhea <5 yrs	8	14	19
Ave.no. treatments/new diarrhea case	1	1	1
Ave. no referrals to BHS/Clinic/Hosp.	3	4	5.4
Ave. no joint activities with BHS/CHW	8	6	NA
Ave. no. reporting activities/CHW	4	3	3
Ave. no environmental sanit. act/CHW	13	9	4
AMW			
Antenatal coverage, percent	35	126	117
Ave. No. contacts per new AN mother	2	3	3
Percent coverage of home deliveries	19	65	48
Ave.no attendances per PN mother	2	3	6
Percent under nutrition <3yrs	13	11	9
Proportion of treated new diarrhea <5	4	8	8
Ave. no. treatments/new diarrhea case	1	1	1
Ave no. joint activities with BHS	9	7	6
Ave. no reporting activities/AMW	3	4	3
Percent referrals of AN/PN/infants to BHS/Clinics/Hospitals	3	2.4	3.1
Let-the (TBA			
Ratio deliveries by trained TBA:BHS	.10	.08	.10
Percent referrals of AN mothers to BHS/ Clinics/Hospitals	19	14	12

Source: DOH

Morbidity and Mortality are difficult to estimate because of the lack of reliable data. It is impossible, therefore, to determine: 1) whether any significant change has occurred in the health status of the target population; and 2) what proportion of that change may have been due to the PHC II project. This same point was made in the PHC I evaluation (see pp 50-51).

Infant mortality is a key indicator of PHC impact, but the actual IMR is still unknown. The SRUB report to the Pyithyu Hluttaw for 1987/88 gave an IMR of 44.5, while USAID data for the same period was 66.0. A recent study of the reliability and validity of vital rates in Burma concluded that there is significant underreporting of vital events: 13 percent for births, 40 percent for deaths and 75 percent for abortions (Khine Maung Thein, p. 9). The principal reasons for underreporting cited were related to the midwives, who are responsible for registering all vital events in the village or ward where they reside: 1) midwives do not count deliveries handled by hospitals, AMWs and TBAs; 2) newcomers to comunities are not counted; and 3) deaths are not counted or are forgotten. The author estimated that the actual IMR was 28.1 in urban areas, 68.9 in rural, and 58.9 for the country as a whole.

In its field visit, the Evaluation Team found recorded and reported IMRs ranging from 6.6 to 64.3, with errors common in recording and calculation.

Given the large investment being made in PHC and the need for accurate data on such key indicators as the IMR, it will be critical for the DOH to develop an accurate vital registration system and/or sponsor scientific studies of the impact of the PHP on health.

4. QUALITATIVE ASSESSMENT

4.1 VHW Performance

The quality of VHW performance was found to be highly variable. AMW performance was found to be reasonably good, while performance of CHW's was poor and declining, with some exceptions. These findings are based on limited field investigation and data provided by the existing DOH information system which may not be entirely reliable, as discussed below.

It was clearly evident to the Evaluation Team, however, that quality of performance was greatly influenced by:

- The quality and frequency of supervision. AMW's receive far more and better supervison than do CHW's. Supervisory visits to CHW's, on the average, are declining as the number of CHW's increases faster than the number of PHS II supervisors;

- The quality of pre- and in-service training. The AMW receives more and better training during formal courses and on-the-job than do CHW's, see discussion on training below;

- The existance of incentives. AMW's usually receive gifts for assisting with deliveries, and many aspire to careers as paid midwives. If CHW's shift away from curative services because of drug shortages and supervised preventive work, incentives become less. Also CHW's have no opportunity to work towards a paid job in health services;

- The extent and quality of local community leadership aimed at improving health conditions. It is this leadership that is needed to provide direction to the CHW while the AMW already has a highly focused job;

- The economic conditions in the local community and the community's ability to provide supplies to support VHW activities, e.g. AMW's need mainly soap while CHW's need more expensive drugs and materials to improve water supply and build latrines;

- The amount of volunteer time available, and flexibility in when time can be given by volunteers. AMW's apear to meet this need more than CHW's who often are employed during the day in earning a living;

- The natural ability and motivation of the volunteer;

- The extent to which volunteers are mobilized around a highly focused preventive health campaign.

Continued problems with CHW performance has resulted in the DOH placing a temporary suspension on mobilizing and training additional CHW's. The DOH is presently considering possible solutions to this problem: 1) recruiting and training only females, 2) asking the Red Cross to take over responsibility for CHW's since they are administratively organized at local levels and have supplies, and 3) improving the training and supervision of CHW's.

It is clearly evident that the CHW concept can be made viable in some and perhaps many locations. It is also clear that the concept will not work in all locations and under all situations in Burma.

4.2 Training, Health Education, Participant Training

4.2.1 Pre- and In-Service Training of VHW's

Qualitative improvements in the pre-service and in-service training of VHW's was to be a major achievement of the PHC II Project. These improvements would normally include: redesigned pre-service training curricula to strengthen specific content areas in high priority preventive/promotive tasks and to strengthen training methods to achieve improved skills development; improved curricula for and training of BHS workers responsible for the pre- and in-service training of VHW's; the design and implementation of training needs assessment procedures to support annual refresher training; improved curricula content and methods for refresher training; and an improved training evaluation system that would provide feedback to trainers and trainees on the extent to which improved knowledge and skills are developed, and for purposes of defining further pre- and in-service service training improvements that may be desired.

Field visits by the Evaluation Team indicated that qualitative improvements in the pre- and in-service training of VHW's had not occurred as planned.

Some improvements in training of AMW's had occurred through the contribution of other projects, e.g., greater attention to nutrition education tasks and skills development in growth monitoring, and through improvements in the skills of BHS trainers gained primarily through continued on-the-job training experience although further training was also given in educational methods.

The three-month didactic phase of AMW pre-service training continues to consist mainly of lecture and discussion, with minimal use of experiential learning methods which are later emphasized during the three month on-the-job phase of instruction. The six months of time given to AMW pre-service training appears to be adequate given the limited number of subjects to be learned, the time available to provide repetitive reinforcement, and the quality and dedication of the LHV's and MW's involved as trainers, who are albeit still weak in training skills.

A serious shortage of training materials continues to hamper AMW training. In some pre-service training courses trainee materials readily available in the past are no longer available, e.g. technical manuals for reading and later on-the-job reference. Training aids are also in short supply and it was apparent that training equipment and aids supplied under the project had not yet arrived at many Township and RHC locations of the service delivery system. Delays in procurement and importation of training equipment are thus evident at many of these locations, although some locations had recently received tripod flip chart/chalk board easels.

Although unstructured and informal, the supervising midwives conduct on-going performance assessments of AMW's for which they have supervisory responsibility. This serves as the basis for on-the-job counseling and training, and provides feedback for defining formal refresher training needs. Although the training of AMW's could be significantly improved through the use of better training needs assessment methods, a more competency-based curriculum in preventive-promotive health services tasks, and improved training skills of trainers, the quality of training as perceived by the Evaluation Team and as reflected in on-the-job performance discussed elsewhere, appears to be reasonable.

Project improvements in the pre- and in-service training of CHW's were found to be negligible or non-existent. Some limited improvements are attributable to the growing training experience of HA's who serve as the principal CHW trainers, and to the periodic workshops they have attended on educational science given by Division/State Training Teams (D/STT's) about once a year. However, about fifty percent of the HA's interviewed indicated they had not received such training during the project period. HA training methods consist mainly of traditional lecture and discussion with little or no emphasis on active learning methods.

The CHW pre-service training course was extended from three to four weeks at the start of the PHC II Project. This provided more time to cover what continues to be an overly ambitious curriculum. A new curriculum has not been developed to narrow the content and shift the emphasis to preventive/promotive skills development. The pre-service training curriculum content and methods have thus remained the the same as those used during the PHC I Project. The CHW technical manuals being used in training and for on-the-job reference also remain the same as the original 1978 manual.

The six-day annual refresher training of CHW's also remains essentially unchanged. Evidence could not be found of training needs assessment activities to identify specific refresher training needs. Township Medical or Health Officers usually prepare a listing of topics for the HA to cover during the refresher course conducted at the RHC. Topics are usually chosen on the basis of high priority health problems and anticipated future campaigns, rather than on specifically defined weaknesses of the CHW's. Emphasis continues to be on knowledge transfer rather than skills and attitudinal development. The use of pre-post tests to evaluate training effectiveness does not occur.

The general absence of training materials also continues to constrain the quality of CHW training. The provision of such training equipment as flip chart/chalk board easels, etc. tends to reinforce traditional training methods.

Although VHW training improvements did not occur as planned, a number of development activities aimed at improving VHW training

were initiated during the project period by the DOH with the assistance of project technical advisors:

- Two workshops were held for D/STT's on educational methodology and community-based training methods, including curriculum development;
- Annual training workshops were conducted by D/STT's for Township and RHC personnel on educational methods including curriculum development;
- A national Situational Analysis Study (SAS) was conducted to obtain information for design of improved VHW job descriptions, which would "provide the content and suggest the methods for pre-service and in-service training of Basic Health Services (BHS) staff and Volunteer Health Workers (VHW);"
- Draft revised technical reference manuals(6) for CHW's and BHS trainers of VHW's were prepared. At the present time they are awaiting some content revisions before final review and approval. The DOH intends to produce and distribute 70,000 copies of the CHW manual and 10,000 copies of the trainers manual, provided funds are made available for printing;
- Preparation of revised job descriptions and revised pre-service training curricula for VHW's, began in early 1987 and is currently underway with expected completion and promulgation in 1988;
- A review of pre-service training institutions (non-VHW personnel) was conducted to identify needed institutional changes;
- Requests for permanent training posts at the Division/State level are being initiated. The project called for these posts to be established and filled during the project period, see sustainability discussion below;
- A plan for improved management training of Township Health Officers has been prepared and submitted, but not yet reviewed and approved;
- The central Training Division appears to have an adequate supply of audio-visual training equipment and some limited capacity to produce training materials.

Unfortunately none of the above efforts have yet to result in the intended improvements in pre- and in-service training, and in

---

(6) These manuals are under review at DOH and could not be released to the Evaluation Team for review.

resulting improvements in on-the-job work performance of the VHW's. There are, however, a number of significant factors related to the project design and its implementation, including the context in which project implementation occurred and the type of technical assistance provided, that explain why the project failed to achieve improved VHW training, and consequently, improved on-the-job performance of VHW's.

Major deficiencies in the mobililization and management of project technical assistance was found by the Evaluation Team to have been a major contributing factor in the failure to achieve improved VHW training:

- Major delays in initiating technical assistance. The long-term training advisor did not begin work until the 22nd project month, 18 months later than planned. The short-term training advisors were not utitilized until the 34th project month, almost three years later than intended. Quite clearly there was insufficient time to initiate and complete sequential, time-consuming, training improvements, let alone to achieve an improved training impact on job performance.

- Resistance of the DOH Training Division to accept project technical assistance. The lack of involvement of the Training Division in project design, review and approval, and the large amount of time that transpired between project formulation and the arrival of technical assistance, was reported by the long-term technical advisor as the principal causes of this resistance. This placed an unusual burden on the long-term advisor to establish rapport and a productive working relationship with counterparts in the Training Division. This further contributed to delays in training improvement. For example, a request by the long-term training advisor for an English language version of the existing CHW curriculum was not met until 12 months after he first sought to assist the Training Division.

- Diversion of the long-term training advisor from project SOW to other activities. The DOH and Training Division counterparts re-directed activities of the long-term training advisor which precluded work on improving VHW training. This may be attributed to delays in beginning technical assistance activities and project contextual changes that had occurred in the interim, including other donor development assistance activities and a new four year health plan (PHP III). Long-term advisor services were utilized to assist with: a major national study on performance of VHW's and BHS personnel; development of technical reference manuals for VHW's and RHC trainers; a survey of health training institutions; workshops for D/STT's; and the analysis and formulation of recommendations for pre- and in-service training systems, e.g., proposed organization and functions of the Central Coordinating Unit of the Training Division.

  While the long-term training advisor made commendable contributions in many areas, a focused effort to improve curriculum and training of VHW's did not occur.

- Diversion of short-term training consultancies from project SOW to other activities. Of the 12 work-months of short-term consulting time designated for improvement of training methods, six work-months were diverted to the reorganization of the CHEB and related matters (Johnson); two work-months were given to developing improved health education strategies and methods (Johnson); two work-months to assisting HATS in reviewing pre-service training of BHS workers (Ausherman); and two work-months were spent in developing a long-range and short-range in-service training plan for the Central Coordinating Unit and arranging logistics for in-country participant training courses (Miller).

  Given past and present capabilities of the DOH to up-grade quality of VHW training, there is some question in the minds of the Evaluation Team about the adequacy of short-term technical assistance originally intended to assist with training methods improvements, and there is no question about the inadequacy of short-term technical assistance that was actually assigned to improving VHW training.

- The distraction and added workload of proposed early termination of long-term training advisor. The decision taken and later withdrawn by Burmese officials, to terminate the training advisor's services after eleven months, created uncertainties and discontinuities for several months mid-way during the training advisor's tour of duty. This adversely affected his performance and, together with other unanticipated conditions discussed elsewhere in this report, added to the Team Leader's administrative workload. These conditions reduced the amount of time available for the long-term advisor to assist with training improvements. In his final report, he indicated that only about fifty percent of his time was devoted to training activities compared to the intended seventy-five percent of time called for in his scope of work.

Thus deficiencies in mobilizing, managing and utilizing project technical assistance help to explain why intended training improvements were not achieved, and why the long-term training advisor's final report consists mainly of recommendations for improving VHW training rather than describing the training improvements actually achieved.

The pre-service and in-service training strategies being employed by the DGH to achieve improved training of VHW's involve mainly educational methods rather than competency-based training (CBT) methods. This distinction is lost in the continuing reference to "task-oriented training" which applies to both educational and CBT training methods.

Reliance upon a hierarchical multiplier training system, in which trainers train trainers at subordinate levels of the system, who in turn train lower level trainers, results in weaker training knowledge and skills at each subordinate level. This is particularly true when trainers at D/S and township levels are relatively inexperienced and unskilled due to continuing turnover.

Just as training skills are diluted at each subordinate level, curricula development is also diluted, e.g., township officers produce only a list of topics to be covered in the refresher training of CHW's. By the time educational methods are transferred to front line trainers responsible for CHW's, traditional educational practices become predominate, with little noticeable improvement in training capability. On the other hand, competency-based training methodologies that utilize pre-designed and more structured curricula emphasizing readings, discussions and skills exercises, and the training of trainers in how to use these curricula, is a far more appropriate and effective approach to transferring training skills down through a hierarchical system. This is particularly true when traditional training methods are so resistant to change. Thus the training development sequence is reversed and curricula design, usually in modular form for flexible selection and use, precedes training of

trainers rather than curricula being developed after the training of lower level trainers occurs.

The competency-based training approach also eases the burden of relatively unskilled peripheral trainers who still need to be trained in training needs assessment methods, but then need only be oriented in how to select and utilize the competency-based curriculum modules. This approach also shifts training activities away from traditional training methods since the CBT curriculum modules do not normally include traditional methods.

Educational, as contrasted to CBT methods, also do not give sufficient attention to training evaluation, feedback and adjustment. The Evaluation Team found that the concept and methods of pre-post training evaluation was non-existent. When training was evaluated, it consisted of measuring trainee performance against pre-set standards during and at the end of the training experience. Workshops often obtained feedback from participants on their assessment of the training experience; however, this practice was not always followed.

A specific system for evaluating training activities and impact throughout the hierarchical training system was intended through the project. The Evaluation Team could not find evidence of one, nor even an understanding of what such a system should consist of beyond quantitative data on numbers of training activities held and numbers of personnel trained. This finding however, does not preclude knowledge existing on the subject among those not interviewed in-depth.

In reviewing the qualifications of project short-term technical consultants, it was evident to the Evaluation Team that specialists in educational methodologies, including community-based health education methodology, were selected and utilized rather than specialists in competency-based training.

With respect to the sustainability of pre- and in-service training of VHW's, a number of issues have emerged:

- Before completion of the project in June D/STT's were to be permanently established through formally sanctioned posts. This did not occur and many of the D/STT's were disolved and staff assigned to other posts. PHN's, who had served as the main strength of these training teams, were transferred. Many were sent to training posts in pre-service training institutions. The Divisional offices visited by the Evaluation Team expected to reform the training teams utilizing DHO's and Health Educators, previously weaker members of these teams.

At the central level, a request is currently pending for permanent training posts at Division/State level. Nevertheless, much of the educational capabilities of D/STT's developed during the project period is being lost and will have to be replaced if Divisions/States are to continue with responsibilities for training at lower levels of the system.

- Project-funded incentive payments for VHW's of 10 Kyats per training day are no longer paid when special project funding ends, nor is such funding included in present DOH budgets in-so-far as the Evaluation Team could determine. At the same time, an increasing number of villages are discontinuing small monthly incentive payments for AMW's and/or are failing to nominate new candidates for training when requested, due to their reluctance to provide this funding. As Townships reach 100% coverage of VHW's and no longer participate in special project funding of training activities, refresher training activities are being discontinued except in cases where VHW's are willing to spend time in training without remuneration or incentive pay. This has serious consequences for the future of the VHW program as periodic refresher training is essential to sustain skills among these types of workers.

- The unavailability of training materials, including technical reference manuals, appears to be an increasing problem, with the DOH not receiving adequate fund allocations to meet even basic needs.

- The unavailability of structured curricula for VHW's in the form of detailed trainer and trainee manuals and related training aids, combined with relatively high turnover of trained teachers particularly at the Division/State and township levels are requiring resources to continually rebuild the training system, instead of using resources to build upon and strengthen it.

4.2.2 Health Education

A major obstacle to improving health conditions in Burma remains the ignorance of the general population about preventive health measures. Field health workers consistently reported that their health education messages were rejected by villagers, e.g., the need to boil water, the need for latrines, etc. One worker reported "you can take a horse to water but you can't make him drink".

Project implementation gave greater emphasis and technical assistance resources to the development of health education than called for in the original project design. Project funds, however, were not originally budgeted nor later re-allocated to the production of health education materials. A request for re-

allocation of surplus project funds is being currently being contemplated for this purpose.

The increasing emphasis being given to health education services by the DOH is mainly attributable to the importance given to community involvement and education in the PHP III. The Evaluation Team, however, found no evidence at the local community level that project technical assistance inputs have had an impact at that level:

- VHW's were universally without health education materials, explaining that "all they had was their mouth". Both BHS supervisors of VHW's and VHW's indicated that the availability of health education materials for use by VHW's would greatly enhance credibility by demonstrating that information in print and sanctioned by the government was consistent with the messages VHW's were bringing to the villagers;

- Basic supplies, e.g., paper and flannel with which health education materials could be made, was consistantly reported as being difficult to obtain at the village level;

- Health education skills of VHW's appeared to be similar to that reported in the PHC I evaluation;

- Pre-service training of CHW's and AMW's continues to focus on knowledge about health education methods rather than health education skills, although it was reported by some HA's that skills development exercises, i.e. practice talk presentations, were now included in annual refresher training;

- It is interesting to note that the quality and availability of health education materials was very uneven among RHC's and sub-RHC's visited, and that the quality and availability of these materials decreases with each subordinate level of the health system. Posters and leaflets appeared to be in greater supply at central and Division/State levels, where they serve to decorate offices, than they are at RHC's and sub-RHC's.

- In one Division, local funds are used to redesign and print leaflets for distribution to lower levels since only a few centrally distributed leaflets are received. Redesign of centrally provided leaflets is required because these leaflets are printed in multiple colors that cannot be easily reproduced for printing in one color. Staff of he Central Health Education Bureau (CHEB) indicated that multi-colored leaflets and posters are preferred by them because such materials are considered to be more effective and less likely to be given away or thrown away. Cost-effectiveness was acknowledged to be a problem however.

- Some of the most effective health education materials found in the field were materials such as flannel boards and illustrations made by MW's for use in the refresher training of MW's and in presenting health education messages to mothers;

- Nutrition education materials in the form of a series of posters and illustrated flip chart booklets have recently been made available to BHS workers in 93 townships. These were provided through another project.

Project technical assistance provided to improve health education was utilized for the following purposes, which helps to explain the absence of impact at field level:

- Review of the organization, structure and functioning of the Central Health Education Bureau (CHEB), and development of recommendations for improvements;

- Establishment and functioning of a Task Force on Health Education Training;

- Improving coordination between the CHEB and other central DOH units including the Training Division and its Central Coordinating Unit;

- Development of outlines and proposals for a variety of health education reference manuals (guides) and improved training in health education at all levels in pre- and in-service training, including an outline for a health education curriculum for BHS workers and lesson plans for teaching community health education methods. These outlines and proposals have been awaiting review and approval by the DOH before starting the development work of preparing the content and methods materials;

- Assistance in planning and conducting a workshop for D/STT's and others in community-based health education methods.

4.2.3 Participant Training

Only a very limited qualitative assessment of participant training was performed due to the limited number of participant trainees available to the Evaluation Team for interview, and because a major evaluation of A.I.D sponsored Burmese participan training is about to be completed. That study is expected to provide substantive information on the quality of training. One recently returned short-course participant and several participants who attended the in-country "700 series" courses were interviewed.

The recently returned participant reported that the two university courses (biostatistics and demography) and the one East-West Center course (MCH), that were attended during her six month visit to the U.S., were invaluable in giving her a much more advanced understanding of the subjects studied. The experience also taught her about the need for study in other closely related subjects (e.g. computer hardware and software utilization) which she considers very important in developing her capabilities to better utilize what she had learned during her six months abroad. Specialized short-course training thus leads to demands for more training in related subjects.

Participants who attended the three "700 series" course given by the Western Consortium, all reported that:

- The subject contents of each course were extremely useful and that they were modified and adapted during the process of each course to accommodate the Burmese situation, which would not have happened in a U.S. based course;

- The instructors were of excellent quality and the participatory learning methods employed were very effective;

- The participants, being all Burmese, could more easily discuss and absorb what was being learned since there was a commonality of experience in the Burmese situation as compared to what the situation would have been in a U.S. based course.

In revieving the cost and quality of these in-country short-courses, it is clearly evident that the cost-effectiveness is superior to that of U.S. based short-courses, although short-courses, whether in-country or abroad, cannot substitute for longer-term advanced educational programs.

4.3 Supervision and Management

The quality of supervision and management within the BHS system remains essentially the same as reported by the PHC I end of project evaluation findings;

"1. Lack of adequate training in supervisory techniques;
2. Heavy workload of supervisors;
3. Lack of leadership from townships, State/Division levels;
4. Supervision biased toward curative rather than preventive activities;
5. Lack of quantifiable information for management decision making;
6. Irregular supervision meetings."

Field visits and some selected in-depth interviews of VHW supervisors revealed that there is minimal understanding of supervision, what it should consist of, and how it should be performed. This was particularly true of CHW supervisors (PHS II's, who have received no training in supervisory skills, despite their title. Supervision continues to be generally viewed as an audit function by medical and health officers, HA's, PHS I's and PHS II's. Also there is little understanding of what is involved in supervising supervisors. Among some LHV's and MW's, however, there was evidence of very effective supervisory performance.

Participant training for higher level DOH officers in health administration was not achieved during the project as originally intended. Except for a plan to provide management training to township officers, which has yet to be acted upon by the DOH, the Evaluation Team could not identify project activities aimed at developing managerial and supervisory capabilities. The UNDP/WHO manpower development project, which involves development of training in supervision and management for the BHS system, and which contributed to the strengthening of HA refresher training in supervision and management three years ago, is apparently viewed by the DOH as their main development assistance project for improving performance in this area.

The expanding numbers of VHW's, without comparable increases in the number of VHW supervisors, is resulting in a declining number of supervisory contacts.

Although AMW supervisors appear to be managing their growing workload well because of their large numbers and continuing excellent ratio of supervisors to supervisees, PHS II workers who are normally expected to provide technical guidance to CHW's and who have always been in short supply, represent a growing problem with sustainability implications for the entire national program. Some CHW's are now reporting receiving only three to four, or fewer, supervisory contacts a year. Others report frequent and regular visits by a variety of BHS personnel. The PHP III provides little remedy to this problem. It calls for an expansion of 25,140 CHW's but only 650 PHS II's through 1990. That is a ratio of 38:1.

4.4 Information System and Operations Research

This section deals with three inter-related components: the health information system (HIS), research and evaluation (R&E), and rapid surveys and operations research.

4.4.1 Health Information System

The overall objective to establish an "effective" health information system and a "village surveillance system" were not achieved. This was due in part to the late start the technical assistance team had, as noted earlier. But even if TA had begun on time it is unlikely that viable systems would have been developed because of the approach the consultants took. Quite a bit of consultant and DOH time went into the development of a new HIS, several workshops were held, a number of consultant papers prepared, five portable computers and printers and an IBM PC-AT were purchased, forms, instructions and computerized data entry programs were prepared. In January, 1987 a pilot test began in five townships in Pegu. That test is still going on.

In conducting this portion of the evaluation, the Evaluation Team interviewed one of the consultants involved in the design (Data Analyst), reviewed the Western Consortium reports, interviewed HIS staff and visited the Pegu test site. Our general conclusion is that the system was poorly conceived and poorly designed. It is far more complex than the current system, requires much more staff time for data collection and data entry, uses more scarce resources (e.g., paper), is much slower, and has no utility because there is no analysis plan, analysis program, or utilization plan. In short, it is simply a massive data collection and data entry system, not an information system.

The Health Information Specialist's initial scope of work called for a review of the current system, an assessment of it's uses, and "development of improvements in the system", and then installation of reporting and analysis procedures. That is, the idea was to start with the current system and build from there. Experience has shown that this is the best approach to take. It was also the approach recommended in the PHC I evaluation.

The first error made was that instead of taking the practical and empirical approach described in the scope of work, the consultant took a very academic and theoretical approach to the problem and developed a process for developing a completely new system. This process concentrated on identifying information needs, or "questions" which the system would then collect information to answer.

The consultant also prepared an analytical report that examined several options for the organization of the data collection and analysis functions, all of which assumed that the system would be computerized and would require separate computer units to process the data. Those assumptions effectively cut out the RHCs and townships, which were to be the principal users of the HIS.

Thus, instead of a simple, manual system that RHCs and townships could use to assess needs and monitor performance, the approach taken virtually assured a centralized high-tech system where data would flow to the State/Division and Central level for processing, analysis and eventual feedback to the operating levels. This is the problem that exists currently and that the new system was supposed to remedy.

The next step taken by the consultant was to convene meetings of all directors and project managers to identify questions that they wanted the system to answer. This was a serious error. It opened a Pandora's box as every director wanted the system to answer every possible question. Over 1,100 variables were identified, most of which were deemed "essential". This approach had been taken several years before when WHO tried to help the MOH develop a simplified HIS. The same result occurred then, and one would have expected the DOH to have learned from that experience not to repeat that approach.

The next step was to reduce these data requests to a "Minimal Essential Data Set", through a group process. This was also an error, because it had been done before and experience has shown over and over again that most people are unwilling to give up their "essential" data needs. That has been the case at the MOH, also. The consultants and DOH officials all acknowledge that the Minimal Essential Data Set (MEDS)is neither minimal nor essential. One of the consultants counted 1,900 items in this MEDS, which currently consists of 12 data collection forms in 20 pages plus 16 worksheets in 23 pages, 24 pages of calculation instructions and 21 pages of report forms.

The consultants could have avoided this development by being more directive, but they saw their role as educators rather than advisors. One consultant said that the DOH "had to go through this process themselves" so that they could experience the implications of collecting large quantities of data. Then, he thought, they would begin to cut out non-essential information. He suggested that workshops be held over the next several years to allow the DOH to review the MEDS and revise it. This was an additional error that probably reflects their lack of experience in working in developing settings. The DOH clearly looked to the consultants for advice and guidance, and it was not given. Now that the project is over, the DOH is left to its own devices to deal with the system. Currently, the Director General is taking an active interest in reducing the MEDS and has already directed that a number of items be eliminated.

Because of the press of time, the consultants and DOH hurridly arranged a field test before the system design had been completed. The MEDS had not been reduced and an analysis plan had not been developed.

The field test got underway in January, 1987 for an expected six-month period. It was not a feasibility test of the system as much as an experiment to compare computerized analysis of data

collected with manual analysis. This objective will not be met, however, since the computers are not being used in the "computerized" test sites, largely because sealed, air-conditioned rooms have to be constructed first.

Visits by the consultants, the Evaluation Team and DOH staff to Pegu have shown that the tests are being carried out (that is, data are being collected), that there are a number of minor problems with the forms, instructions, etc., and that at least some health workers are complaining about the amount of time the new system requires. The DOH is planning a formal review of the system in the next few months. Hopefully, this review will include an examination of the time and costs of the system.

The Evaluation Team has concluded that the system will require an enormous amount of staff time, not just for data collection, but for compilation, data entry, data processing, analysis and reporting. For example, it currently takes two persons (one to enter, one to verify the entry) one hour to enter the data into a computer from one health worker's set of forms. Each township would have approximately 70 forms per month to process (5 AMW + 5 CHW in 7 RHCs) for a total of 140 personhours/month (70 forms x 1 hour x 2 persons to enter/verify). That is practically one fulltime person per township simply to <u>enter</u> the data. Processing the data, producing tables, and analyzing the results will also take considerable time.

As noted previously, no analysis procedures have been developed so far. The Data Analyst prepared 90 dummy tables in August, 1986 as <u>examples</u> of the kinds of tables that could be produced. Many more table could be developed, of course. The expectation is that the DOH, somehow, will choose the tables it needs. Until that occurs, the Computer Specialist cannot prepare a computer program to generate the tables, and the Data Analyst cannot develop analysis procedures. Thus, at this time, there is no data processing or analysis component to the system and no plans to develop one.

The MEDS includes a "Cluster Population Coverage Sample" that would replace the Lay Reporting System currently being used. Apparently, this component would eventually become the "Village Surveilance" system specified in the PHC II project paper. Each midwife is asked to do an annual census of 100 households in her village or ward and to keep track of vital events, immigration and emmigration. The system is relatively simple, but it will not produce valid estimates of vital rates because of two methodological flaws.

1. The villages sampled are not selected at random and are biased toward villages with better health care because the midwife lives there. The sample village should be selected at random from the 5-6 the midwife serves.

2. The 100 households selected in each village are also not representative. The instructions are to select those that are "most proximate" (closest) to the midwife. These households are also likely to have better health care because of their proximity to the midwife. The 100 houses do not have to be selected at random, although this would be the ideal approach. An acceptable alternative is the WHO technique of selecting the first household at random and then moving in one direction until the cample is completed.

3. The consultant also recommends not using data from midwives whose reports are incomplete. This would introduce an additional bias. The problem can be dealt with in other ways: better supervision, weighting of usable data, follow-up.

4.4.2 Research and Evaluation

The Project Paper did not call for a specific number of studies, but allotted $123,000 in local currency, which could be expected to support from 8-12 studies. The Project Paper also gave many examples (see pp. 15, 25) of suggested studies, ranging from periodic household surveys of morbidity, mortality and health care, to financing of health care delivery, and the effects of the new training methods/curricula on CHW performance.

The DOH identified 9 studies that were funded under PHC II:

1. Dr. U Ba Tun. Study of the Demand in Villages for All Types of Pharmaceuticals as a Result of the Deployment of VHWs. 1984

2. Prof. Aung Tun Thet. Observational Study of the Time Utilization of VHWs and BHS. 1984

3. Prof. Aung Tun Thet. Study of the Costs Currently Incurred by the Health Care System in the Treatment of Septic Abortion. 1984

4. Prof. Aung Tun Thet. Studies of Ways of Increasing Involvement of VPC's or VHC's in Planning, Implementing and Evaluation of the VIllage Health Programme. 1984

5. Dr. D. Khin Hlaing. Household Survey of Development of Indicators for Assessment of the People's Health Plan. 1985

6. Dr. C. Khine Ming. Study of the Monitoring of Vital Events, Nutritional Status 0-3 Birth Weights and PHC at the Village Level. 1985

7. Dr. Tin Tin Hmon. Repeat Survey on the Performance of TBA Three Years after Training. 1985

8. Dr. U Thein Dan. Situation Analysis Study on Primary Health Care and Basic Health Services. 1987

Only the last of these studies was available for review by the Evaluation Team. Apparently, the first study has not gotten underway as yet; studies 2, 3, 4 are completed but the author has been abroad for over a year and copies of the reports could not be found at DOH or in the USAID project files; studies 5 and 6 are still in the analysis stage; and number 7 could not be found.

Another study, which is still underway, was really an operations research training exercise. It deals with the performance of the Public Health Supervisor II. The data are being analyzed at this time and a report is expected within a few months. A second study, also an OR workshop exercise, is a training needs assessment of BHS staff. This study is in the data collection phase.

The Training Division, H.A.T.S., and the Nutrition Division conducted studies during the period, all funded by other agencies (WHO, DANESA, JANS). The most relevant of these is the HATS study on the performance of VHWs and their supervisors. This study is in the analysis phase and a report is expected in October. Another relevant study is a follow-up to the weaning study conducted under PHC I. This is also expected to be completed in the next several months.

Although the above studies appear to be highly relevant to the Primary Health Care program, it is disappointing to learn that most have not been completed and those that have cannot be found, indicating their findings probably have not been used.

4.4.3 Rapid Surveys and Operations Research

The PHC II project anticipated special studies to complement the data produced routinely by the information system. The rapid survey and operations research approaches developed by the consultants are both designed to fill this role.

One consultant, the Data Analyst, spent the bulk of his time, not on developing the analysis procedures for the HIS, but "chose to address the development of methods of data gathering alternative to the major HIS"(2). Given the direction the HIS was taking, this may have been fortuitous, because the rapid survey (RS) may be one of the better contributions of the contractor to the DOH.

Rapid surveys involve short and specific questionnaires on specific topics, small cluster samples (30 clusters of 7 respondents each), data entry in the field using portable computers, and analysis and preparation of preliminary reports while in the field.

---

(2) Team Leader Report, p. 40.

The consultant held a series of workshops for a small group of DOH staff on computer software use (Lotus 1-2-3, Surveymate, dBase III+, SPSS) and a special workshop on RS methodology. The highlight of the training, and the most impressive aspect of this activity, was the design and conduct of an RS by the consultant and 9 DOH trainees. The survey was done in Hlegu Township May 4-7, 1987 to assess health status of children under 5. One-half day after data collection was completed, a preliminary report was presented to the Hlegu TMO. A second report was presented to senior health officials in the DOH on May 21.

The DOH plans to replicate this study in another township, and depending on the results, may take further steps to institutionalize the RS and/or conduct additional studies.

A few problems with the approach have been identified, however. First, the Hewlett Packard computer, while superior in many ways, does not accept a number of IBM-compatible software. The consultant had to use his own portable computer (a Toshiba) instead. Second, the ink-jet printer purchased is very convenient, small and portable, but it requires a specially-coated paper that is hard to obtain and expensive.

More significant, there is no plan for the RS. The consultant recommended that the DOH establish a Rapid Survey Unit, but there has been no analysis of the feasibility and costs of maintaining such a unit. No estimates have been made of the costs of surveys, either, or of the number of surveys that a unit could feasibly conduct in a year.

Eight personmonths of technical assistance were set aside for operations research and evaluation. Three consultants were involved in this activity.

The first consultant changed his scope of work and instead of evaluation and operations research, he prepared a paper on health services delivery in Burma, a subject that was totally irrelevant to the project and contractor's scope of work.

The second consultant conducted a workshop on epidemiology and designed a study to evaluate the impact of an MOH goiter program. Although this was evaluative in nature, the topic was low priority, given the focus of PHC II on the health of children and mothers. An advantage of this study is that it was to employ rapid survey methodology.

The third consultant conducted several short workshops on Operations Research (OR) to help the Burmese set research priorities and learn some qualitative data collection techniques. He also helped design two studies, neither of which was OR or evaluation. The first is a descriptive study of PHS-I activities. The second is a training needs assessment.

4.5 Technical Assistance

The quality and effectiveness of project technical assistance was variable, depending upon the receptivity of the DOH, the appropriateness of the technical assistance scope of work, the extent to which consultants were diverted from their intended scope of work, and the appropriatness and capability of the consultant selected for the job that was to be done.

The Evaluation Team identified a number of problems in the selection, mobilization and utilization of technical assistance that warrants attention in this report. It is clear that maximum benefits were not obtained by the DOH for the followiong reasons;

- Serious delays in activating technical assistance. The long-term advisor did not begin work until midway through the project which did not allow the intended follow-on time needed for his contributions to be implemented and reflected in project impact. Short-term advisors were even later in being utilized. The Project Paper called for use of one consulting firm to "receive timely and reliable services over the life of the project." This did not occur because of the long lead-time in arranging a technical assistance contract;

- DOH and Training Division resistance to receiving technical assistance. This is obviously an institutional problem as receptivity of technical advisors at the personal level by counter-parts and other Burmese staff appears to have been very good. Nevertheless, access and therefore contribution of technical advisors was restricted;

- Diversion of technical assistance from originally intended scopes of work to other activities. This is attributed to changing needs and priorites of the DOH, and in certain instances to lack of control in allowing short-term consultants and counter-parts to pursue their own interests and agendas without regard to project needs;

- Inappropriateness of some short-term consultants. Although the consultants utilized were capable specialists in their own fields, some with widely recognised reputations, too often their skills did not match the job to be done, e.g. utilizing an education specialist for a training specialist's job, and utilizing a high technology information system specialist for a developing country (appropriate technology) information system specialist's job. Although the long-term advisor and some short-term consultants performed well, some short-term consultants were unqualified, overly academic, and unsuitable.

The overall result of the above findings suggests that project technical assistance was much less effective than it could have been.

5. CONCLUSIONS AND RECOMMENDATIONS

5.1 General Conclusions and Recommendations

The overall conclusion of the Evaluation Team is that PHC II was effective in training, equiping and deploying additional VHWs. As with PHC I, the project met its principal quantitative goals but the quality of CHW performance, training, supervision, health education, information system and research and evaluation was not adequate, particularly given the specific emphasis this project was to give to improving quality.

The overall recommendation of the Team is that AID continue it's assistance to the PHP, and that it continue to help the DOH find ways to improve the quality of services, training, and supervision. Support should continue also for development of an effective information system and the development of a viable research and evaluation capability.

5.2 PHC II Priority Areas

5.2.1 Training and Health Education

Training improvement objectives of the project were not achieved, although a variety of development initiatives were begun and some completed, which will eventually contribute to improved VHW training.

The overall strategy for training of VHW's, i.e. educational methodology rather than competency-based training methodology, is, in the judgment of the Evaluation Team, inappropriate technology. The Evaluation Team recommends that:

1. The DOH shift to the use of competency-based training methodology for pre- and in-service training of peripheral health workers;

2. Senior training officers and trainers of the DOH and central Training Division be given intensive short-course training in competency-based training methodologies which should include skills development in: 1) designing and conducting training needs assessments based on trainee capabilities; 2) designing highly structured curricula including detailed instructive lesson plans and materials which emphasize readings, discussions and skills development exercises; 3) designing, conducting and assessing pre- and post-training evaluations, including design and use of appropriate evaluation instruments for assessing knowledge and skills development; and 4) the design and conduct of training to train trainers in the use of competency-based training curricula.

3. Future technical assistance be provided to the DOH to provide follow-on reinforcement of knowledge and skills in competency-based training methods gained through intensive short-course training. This should include curricula design, training of trainers, and training evaluation.

4. That nationally standardized job descriptions for CHW's be limited in scope and focus and be developed in two sections: 1) standard nationwide tasks, and 2) tasks that are specific to local needs and priorities; that the standardized portion of job descriptions describe only those limited tasks considered highest priority from a national perspective.

5. A new competency-based training curriculum in modular format be developed for CHW's that reflects the final report recommendations of the previous long-term training advisor: that an initial four week pre-service training course be given followed by a one week course of training every three months for the remainder of the year; that the initial four week curriculum be defined as core curriculum given to all CHW's and be designed in modular format for ease of selective use in later refresher training; that the follow-on three separate weeks of curriculum be flexible to allow decision-making at the local, township or Division/State levels, in determining what training modules are to be taught, based on the special needs and priorities of the location; that training modules be developed centrally to accommodate these varied training needs; that this modularized curriculum be selectively utilized to re-train existing CHW's as determined necessary by training needs assessments, and utilized for follow-on refresher training.

With respect to health education, the conclusion must be drawn that the DOH is too over-centralized in its approach to improving

health education services and materials. The needs and priorities of VHW's and BHS workers are not being met. The cost-effective and continuing face to face contacts at the local community level should be supported and exploited. It is therefore recommended that:

1. Priority be given by the DOH and CHEB to the provision of simple, inexpensive and easily reproducible health education materials for use in communities by VHW's and BHW's, including basic raw materials from which health workers can produce their own health education materials, rather than continuing the production of limited numbers of expensive multi-colored materials;

2. Health education methods not be utilized alone in training peripheral health workers in the skills needed to perform health education work; that special competency-based training modules be designed and provided for use in training VHW's and BHS workers in health education skills, including communications skills and skills in preparing their own health education materials. (see competency-based training recommendations above);

3. QCCS Project funds presently budgeted for mass media health education be re-allocated to meeting the above higher priority health education needs of the peripheral service delivery system.

4. The CHEB be reorganized to provide greater support to what is becoming a vast cadre of frontline VHW and BHS workers.

With respect to participant training, quantitative targets were clearly not met due to delays in candidate processing and approval. The project has been extended to allow completion of scheduled overseas training, however, quantitative targets will still not be achieved.

Long-term and short-term participant training remains a high priority need of the DOH, and in most areas of advanced study there are currently no in-country training alternatives except bringing foreign specialist instructors to Burma which would not meet long-term participant training needs. The Evaluation Team therefore recommends that:

- Higher priority be given to, and more efficient procedures be established by GSRUB for, selecting and approving participant training candidates;

- A.I.D. continue to give priority to supporting long-term and short-term participant training for the DOH, and;

- In-country intensive short-courses on specific high priority subjects, which are planned and conducted by visiting instructors, should continue to be supported with the understanding that such courses are not substitutes for long-term advanced educational programs.

5.2.2 Supervision and Management

The DOH is relying primarily upon UNDP/WHO projects to assist with development of management and supervisory capability at lower levels of the BHS system, although such assistance is not evident in the field. This assistance emphasizes training that uses educational rather than training methods and does not address non-training factors that influence the quality and effectiveness of managerial and supervisory performance. Consequently, existing efforts will not achieve improved supervision and management. It is therefore recommended that:

1. DOH planning and budgeting for supervisors of the BHS system be revised to include a more appropriate number of VHW supervisors to permit adequate supervision and on-the-job training of the expanding number of VHW's; and that more adequate staffing of township offices to provide for improved supervision be given a high priority as well;

2. Specific operating policies, procedures and formats be developed through research and identification of existing successful supervisory and managerial practices in the BHS system; that guidelines for management and supervision at township, RHC, Sub-RHC and village levels be developed and produced in the form of reference manuals for each level including the village council level; that these manuals be used as curriculum content materials in competency-based training and for on-the-job reference purposes;

3. Job descriptions of managers and supervisors be revised to give greater emphasis to management and supervisory functions;

4. Training methodology in the form and substance of competency-based training, be utilized in the training of township officers and other managers/supervisors at lower levels of the BHS system;

5. Provision be made for regular periodic refresher training of managers and supervisors at peripheral levels of the system..

5.2.3 Information System, Research and Evaluation

5.2.3.1 Information System

The need for an effective information system is clear. PHC II had as a major priority, the development of such a system. This was not achieved for two interrelated reasons: 1) the lateness with which technical assistance got underway; and 2) the approach to development of the system taken by the consultants. Instead of improving the current system, the consultants designed a completely new system that is more complex, costly and of less use than the current system. It contains only data collection and data entry forms and procedures. There is no analysis plan, no utilization plan, and no plans to develop them.

The DOH will undertake a critical review of this system over the next few months and the Evaluation Team strongly encourages them not to limit the review to the data elements, but to examine the time and costs involved in the collection, processing and analysis of the data as well as it's utility.

The Team would also repeat the recommendation of the PHC I evaluation that a new system not be designed, but that the current system be modified and decentralized so that relevant data can be collected, processed and used at township and RHC levels to monitor project performance and plan future strategies.

The information needs of the States/Divisions and central office can be met through quarterly and annual forwarding of selected data on a limited number of indicators (e.g., 10-12). Additional data that is needed periodically or infrequently could be obtained through special surveys (including rapid surveys). The DOH should support the development of standardized rapid surveys in priority PHP areas, for example, EPI/UCI, ORT/diarrhea, growth monitoring/nutrition, environmental health/latrine construction, malaria, and performance of CHWs and AMWs.

The QCCS does not reflect this recommendation for a decentralized system, and the Evaluation Team would encourage both USAID and the DOH to consider this alternative approach before investing any more resources in the development of the HIS that is being tested in Pegu.

5.2.3.2 Research and Evaluation

Although the Evaluation Team was not able to locate copies of seven of the eight R&E studies conducted under PHC II, the topics appear to be highly relevant. The one study reviewed (Situation Analysis Study) was highly relevant and useful to the DOH. If the other studies were as well-designed and useful, this would be a significant improvement over the state of R&E found in PHC I. The "OR and evaluation" studies developed by the consultants were reelevant, but none have been concluded to date.

The fact that most of the studies have not been completed and that most of those that have cannot be located indicates that little or no relevant research and evaluation was produced during PHC II, even though this was a priority area for the project. In fact, compared to PHC I, R&E has actually regressed.

Neither was any progress made in designing and implementing an evaluation strategy or system. This lack of attention to a fundamental project component means that once again, as in PHC I, little reliable information was available on VHW/BHS performance, project impact on health, project problems, or even project activities. Strategic planning and programming decisions have had to be made without access to essential information.

The need remains for action oriented research to complement the data that will eventually be produced by the HIS. The initial developmental steps taken in PHC II toward developing a Rapid Survey and Operations Research capability are certainly steps in the right direction and deserve continued support. However, additional technical assistance will be needed in designing an evaluation system, setting priorities among R&E needs, designing studies, developing analysis plans and procedures, and disseminating results to decisionmakers. If the DOH is to assume responsibility for R&E, it will have to: 1) establish an R&E Unit, or equivalent locus for its expertise in this area; and 2) develop the expertise through long-term participant training in applied research and program evaluation. An alternative, that had been recommended in the PHC I evaluation, is to build the capability in existing research institutions (e.g., the Department of Medical Research, the Institute of Economics) and develop an institutional arrangement that will permit the DOH to commission studies it needs from these institutions.

R&E priorities remain as they were after PHC I: periodic studies of VHW performance; regular surveys to measure the impact of the PHP on health; and OR studies on operational problems in training, supervision, the use of volunteers, and community financing of PHC.

5.2.4 Technical Assistance

The DOH and related organizations have a critical need for "state of the art" technology in research, systems design, training and other areas. Technical assistance represents the most efficient method of transferring technology, provided the technical assistance consultants are carefully selected and managed to achieve technical assistance objectives. Unfortunately, this did not always occur in the project.

Many of the short-term consultants were inappropriate for the tasks assigned. Two were actually asked to leave Burma. Several others revised their scopes of work to suit their own interests. Most perceived their roles as educators rather than technical

advisors and change agents and so emphasized education rather than skills development.

For the future, the Evaluation Team recommends that:

- Technical assistance continue to be offerred to the DOH and its related organizations on a high priority need basis;

- The scopes of work of consultants be carefully developed to reflect precise project requirements and be adhered to in the selection and use of each consultant;

- Short-term consultants be employed with a commitment to be available for follow-on intermittant work to ensure continuity and effectiveness in continuing and following up on the development task.

5.3 Other Recommendations for QCCS

There are several new components in the QCCS project and the Evaluation Team believes that lessons from PHC I and PHC II can and should be applied to those components. Three specific recommendations occurred to the Team:

1. There does not seem to be any need for a mass media campaign to promote ORT and EPI. Both are widely known and widely accepted. A better use of these resources would be to develop and distribute simple health education materials (black and white leaflets, posters) to RHCs and VHWs. There is a desperate need for these materials, and their impact is likely to be far greater than through the extremely limited Burmese mass media.

2. The proposed project anticipates buy-ins to a diverse number of AID-centrally-funded contractors. Experience has shown that the Burmese prefer and work best with a small number of consultants who: a) can spend 3-4 months in country at one time; and b) are able to return periodically to continue their TA.

3. More technical assistance than is currently programmed will be needed in QCCS to develop "competency-based" training capabilities and operations research and a viable information system. Funds will also be needed to reproduce training modules and materials.

REFERENCES

1. Agarwal, Seema. The Participation and Training of Burmese Women in AID-Funded Programmes in Burma. USAID: Rangoon, Dec., 1986.

2. Carlaw, Raymond W. Report of Training Consultant. Western Consortium for the Health Professions: San Francisco. April, 1987.

3. Carlaw, Raymond W. Team Leader Report. Western Consortium for the Health Professions: San Francisco. May, 1987.

4. Detels, Roger. "Workshop on Epidemiologic Strategies for Testing Etiologic Hypotheses and Evaluating Intervention Studies, Department of Health, March 18-21, 1986." Mimeo.

5. Frerichs, Ralph. Proposed Analytic Procedures for the New Health Information System and A Workshop on Microcomputers and Rapid Surveys. Western Consortium for the Health Professions: San Francisco, September, 1986.

6. Frerichs, Ralph. Young Child Cluster Survey: A Report on the First Rapid Community-based Survey in Burma. Western Consortium for the Health Professions: San Francisco, May, 1987.

7. Frerichs, Ralph. Final Report on the New Health Information System and the Rapid Survey Unit. Western Consortium for the Health Professions: San Francisco, June, 1987.

8. Gustafson, Harold C. Operations Research in Burma's Primary Health Care System. Western Consortium for the Health Professions: San Francisco, May, 1987.

9. Johnson, Donald C. Consultanship on Educational Methods. Western Consortium for the Health Professions: San Francisco, September, 1986.

10. Minkler, Donald H. Report of Course Number 778: Maternal and Child Health Program Design, Management and Evaluation, June 30-July 9, 1987." Western Consortium for the Health Professions: San Francisco.

11. Mytinger, Robert. Toward An Improved Health Information System for Primary Health Care. Western Consortium for the Health Professions: San Francisco, October, 1985.

12. Mytinger, Robert. Alternative Designs for PHC/BHHS Information System. Western Consortium for the Health Professions: San Francisco, November, 1985.

13. Nelson, John H. Audio-Visual Consultant's Report. Western Consortium for the Health Professions: San Francisco, April, 1987.

14. Oot, David, et al. A Review of AID's Health Sector Strategy in Burma. PRITECH. February, 1985.

15. Reynolds, Jack, et al. PHC I End-of-Project Evaluation. USAID: Rangoon. February, 1985.

16. Roemer, Milton I. Primary Health Care in Burma's National Health System. Western Consortium for the Health Professions: San Francisco, August, 1986.

17. Stubbs, Harrison A. Report on Software and Existing Micro-Computers and Related Needs of Health Information Systems and Primary Health Care, and an Introductory Workshop on Statistical Analysis using Personal Computers. Western Consortium for the Health Professions: San Francisco, March, 1986.

18. Stubbs, Harrison A. Computer Applications Specialist (Report). Western Consortium for the Health Professions: San Francisco, December, 1986.

19. Than Sein. "Development of Health Information System." Ministry of Health, Department of Health: Rangoon (mimeo), October, 1986.

20. Than Sein. Health and Development: A Case of Ayadaw Township, Burma. Ministry of Health, Department of Health: Rangoon. April, 1985.

31. Thein Dan. Situation Analysis Study. MOH, DOH, February, 1987.

32. Thein Dan. Review of DOH Training Institutions. MOH, DOH, March, 1987.

33. USAID. Project Paper, Burma. Primary Health Care II, (482-0004). 1983

34. USAID. Project Paper Amendment, Burma. Primary Health Care II, (482-0004). 1985

35. Worth, Robert M. Overview of the Burma Primary Health Care II Computer-Assisted Data Collection and Report System. Western Consortium for the Health Professions: San Francisco, November, 1986.

APPENDICES

A. PHC II Logical Framework

B. Health Status Statistics

C. PHC II Commodity Status Report

D. Kyat Expenditures

E. PHC II Planned and Actual VHW Pre-service Training

F. PHC II Planned and Actual CHW & AMW In-service Training

G. Officials Contacted

H. Evaluation Team Schedule

APPENDIX A

PP II LOGICAL FRAMEWORK

PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK

(INSTRUCTION: THIS IS AN OPTIONAL FORM WHICH CAN BE USED AS AN AID TO ORGANIZING DATA FOR THE PAR REPORT. IT NEED NOT BE RETAINED OR SUBMITTED.)

Life of Project:
From FY 83 to FY 85
Total U.S. Funding $10.0 million
Date Prepared: 2/20/83

PAGE 1

Project Title & Number: PRIMARY HEALTH CARE II (482-0004)

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
Program or Sector Goal: The broader objective to which this project contributes: (A-1)	Measures of Goal Achievement: (A-2)	(A-3)	Assumptions for achieving goal targets: (A-4)
Institute declining morbidity and mortality among children under 5 and their mothers that is caused by - diarrheal disease - malnutrition - selected infectious disease - improper obstetrical care - unregulated fertility	Morbidity 1983 % Change Diarrhea #/1000 Malnutrition normal wt/age #/1000 Neonatal tetanus #/1000 # Newborn entering surveillance system # Hospital Admisssions for Abortion Mortality Diarrheal dis #/1000 Neonatal tetanus #/1000 Maternal #/1000	- Records of AMW/MW weight clinics - Sample surveys - Hospital admission records - AMW/MW logs	- Data collection is extensive, accurate and timely enough to measure morbidity and mortality decline. - Volunteer Health Workers are supported and supplied by Village People's Council. - The curative care health chain is strong enough to accept and care for referrals from VHW's.

PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK

Project Title & Number: Primary Health Care II (482-0004)

Life of Project:
From FY 83 to FY 85
Total U.S. Funding $10.0 million
Date Prepared: 2/20/83

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
Project Purpose: (B-1) a. To expand rural health services coverage in Burma by Volunteer Health Workers, with increased emphasis on quality of services thru improved pre-service and in-service training. b. To introduce fertility and infertility counselling and services as an integral part of MCH services.	Condition(s) that will indicate purpose has been achieved: End of project status. (B-2) End-of-Project Status Coverage An additional - 8000 CHW's trained, equipped and deployed to rural areas in (147) townships - 2701 AMW's trained, equipped and deployed - 12500 TBA's trained, equipped and deployed Throughout Burma: - 45% of villages will have a CHW - 100% of Village Tracts will have an AMW or MW - 15,000 trained TBA - 120 of 314 rural and urban townships offer reproductive health services - Approx. 15% of Eligible Couples using contraceptive services provided by the DOH Public Health Program in areas offered and infertility services available in 15 locations by 1986.	(B-3) -DOH records of pre-service and in-service training by location. -AMW/CHW logs -HIS aggregation of AMW/CHW logs -Sample surveys -Hospital and clinic MCH records	Assumptions for achieving purpose: -Task oriented, practical trainin will raise level of worker compe tence and hence quality of servi -Villages will recognize and uti competent medical assistance. -There in a demand for family Pl Counselling services.

PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK

Life of Project:
From FY 83 to FY 85
Total U.S. Funding $10.0 million
Date Prepared: 2/20/83

Project Title & Number: PRIMARY HEALTH CARE II (482-0004)

PAGE 3

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
Project Purpose (B-1):	Conditions that will indicate purpose has been achieved: End-of-Project status. (B-2)	(B-3)	Assumptions for achieving purpose: (B-4)
	CHW		
	An increase in the number	Site visits	1. That job oriented training of volunteers with regular in-service training and supervision will be sufficient to enable workers to influence villagers.
	# Latrines in villages	HIS Reports	
	Village sanitation check list to insure	Annual DOH Evaluations	
	- no scattered refuse	Inspection of CHW logs	
	- no standing water	USAID Evaluation	
	- covered water containers in use		2. That the VIPC councils can and will provide support to the volunteer workers to institute changed behavior.
	An increase in the amount of Personal hygiene		
	- lectures with increased attendance		
	Immunizations arranged by VHW		
	Curative treatments		
	# diarrhea cases		
	# first aid patients		
	# total patients		
	An improvement in VHW Diagnostic skills	Corroborating diagnoses from RHC or Township Medical staff	

PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK

Life of Project:
From FY 83 to FY 85
Total U. S. Funding $10.0 million
Date Prepared: 2/20/83

Project Title & Number: Primary Health Care II (482-0004)

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
Project Purpose: (B-1)	Conditions that will indicate purpose has been achieved: End of project status. (B-2)	(B-3)	Assumptions for achieving purpose:

	Quality
	AMI
	
	Obstetrical care at the Village level including increase in the urban of
	Prenatal visits
	Deliveries
	Post-natal visits
	
	A Nutrition surveillance system in place which tabulates numbers
	// regularly weighed
	// newborn in regular weighing
	// not gaining % decrease
	// < 5 diarrhea % decrease		

PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK

From FY 83 to FY 05
Total U.S. Funding $10.0 million
Date Prepared: 2/20/83

Project Number: Primary Health Care II (482-0004)

NARRATIVE SUMMARY (C-1)	OBJECTIVELY VERIFIABLE INDICATORS Magnitude of Outputs: (C-2)	MEANS OF VERIFICATION (C-3)	IMPORTANT ASSUMPTIONS Assumptions for achieving outputs (C-4)
ining System Improvement Curricula revised for more practical, task-oriented training (pre and in-service). Training methods and teaching aids geared to practical, task-oriented training. S/DTTs appointed, working and using revised curricula which contains basic principles of management. entation of VTPC & TPC complete 147 Townships -service training of CHW, AMW, complete in 147 Townships plete in 147 Townships ervice training of CHW, AMW TBA complete in 147 Townships	**Training** - New 4 week CHW course - Additional material on R^x of diarrheal disease and weight surveillance - In-service training on annual basis (5 days) - Trainers manuals - 1984 - VHW workers manuals - 1984 - Community education materials developed - 1984 - S/DTTs recruited and trained in 14 State and Divisions - % of townships with all VPCs oriented - Number of VHW's trained: Pre-Service / In-Service CHW 8000 / 22158 AMW 2801 / 7200 TBA 12000	- Review of printed curricula, workers and trainers manuals - Field checks - Records of pre and in-service courses	- S/DTT's will be recruited by the Department of Health and after training will be encouraged to perform training and supervisory duties. - DOH will coordinate with the Burma Socialist Program Party, the Minist of Home and Religious Affairs and village-based organization like Lan Youth Corps in arranging conducting Village People's Council orientatio courses.

PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK

Project Title & Number: Primary Health Care II (492-0004)

Total U.S. Funding: 110.0 millio
Date Prepared: 2/20/83

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
Goal: (G-1)	Magnitude of Outputs: (G-2)	(G-3)	Assumptions for achieving outputs: (G-
II. Production and Distribution System - VHW initial supply kits issued each AHW, VHW, TBA - VHW resupply system in place	- Number of Kits Issued: 8000 CHW kits 2801 AHW 12000 TBA - All workers get essential resupply from BPI or open market.	- Record of distribution - Field checks - Field checks - Records of distribution Field checks	- AID able to deliver commoditi on schedule. - BPI produces needed drugs; VIP provide funds; supply system operates to provide supplies.
Health Information Sytem HIS Reporting System in operation and reports in hands of health planners/managers	Reports covering at a minimum these items by Township: 1. # of<5 children with diarrhea 2. # of<5 deaths due to diarrhea 3. # of newborn entering weight surveillance 4. # Proportion of children. <5 below standard of wt/age. 5. # of pregnant women under observation. 6. # of deaths due to childbirth 7. # of cases of neonatal tetanus admitted to hospital	Published Reports	- DOH develops inventory system Decision on data to be collec 1983. Collection procedures establi 1984. Analysis procedures by 1984. Publication by 1984

PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK

Life of Project:
From FY 83 to FY 85
Total U.S. Funding $10.0 million
Date Prepared: 2/20/83

Project Title & Number: Primary Health Care II (482-0004)

NARRATIVE SUMMARY (C-1)	OBJECTIVELY VERIFIABLE INDICATORS Magnitude of Outputs: (C-2)	MEANS OF VERIFICATION (C-3)	IMPORTANT ASSUMPTIONS Assumptions for achieving outputs: (C-4)
1. Family Health Counselling Service Sites in Operation staffed by trained persons and equipped and supplied Forms designed and adopted: - Client records - Supply system records - Reporting Studies and reports available to administrators	- Approx. 600 clinical service sites in 120 townships: 1984-93 1985-40 1986-50 - Every clinical site and domiciliary service provider - Base-line measures of fertility-related morbidity and mortality among women; infants and children; and of contraceptive use - Reports of findings and recommendations by consultants	Service statistics Site visits Monthly service statistical reports Monthly supply issuance, stock balance, and distribution reports Site visits Published reports	Timely procurement, arrival and distribution of clinical equipment and contraceptives. Willingness of administrators and MOH technical staff to accept revised or additional recording and reporting forms. Availability of sufficient data to establish base-line indicators

Project Title & Number: PRIMARY HEALTH CARE II (482-0004)

LOGICAL FRAMEWORK

Life of Project: From FY 83 to FY 85
Total U.S. Funding $10.0 million
Date Prepared: 2/20/83

NARRATIVE SUMMARY Project Purpose: (D-1)	OBJECTIVELY VERIFIABLE INDICATORS Implementation Target (Type and Quantity) (D-2)			MEANS OF VERIFICATION (D-3)	IMPORTANT ASSUMPTIONS Assumptions for providing inputs: (D-4)
		1/ FX ($000)	2/ LC (K000)		
A. VHW Training/Deployment				Grant Agreement	1. Other Donor Support (WHO, UNICEF, ADAB forthcoming as described in Table 5).
1. Technical Assistance (42 pm)	42 pm	636		PILs and PIOs	
		636		Mid-term Evaluation	
2. Commodities				DOH Health Information System reports	2. Single host-country contract with U.S. consulting firm can provide bulk of T.A. Services
(CHW kits)	8200 ea.	840	-		
(AHW kits)	2800 ea.	139	-		3. A pool of participant training candidates exists sufficient to select adequate number of participants with technical skills and English language capability.
(AHW Medicine kit)	5600 ea.	611	-		
(TBA kits)	12000 ea.	288	-		
(AHW kit cases)	5600 ea.	54	-		
(Scales)	6000 ea.	180	-		
(Drugs - initial supply)	-	676	-		
(RHC equip.)	280 RHC's	103	-		
(Sub-center equip.)	1120 Sub-center	56	-		
(Station hospital equip.)	40 hospital	600	-		
(Training equip./A-V/Video)	-	250	-		
(Vehicles - S/DTT/F.H.C.)	22	330	-		
		4127	-		

1/ AID dollar grant

2/ Project Fund Account (AID)

PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK

Life of Project:
From FY 83 to FY 88
Total U.S. Funding $10.0 million
Date Prepared: 2/20/83

Project Title & Number: PRIMARY HEALTH CARE II (482-0004)

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS			MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
Project Inputs (D-1)	Implementation Target (Type and Quantity) (D-2)	FX ($000)	LC (K000)	(D-3)	Assumptions for providing inputs (D-4)
3. Participant Training					
(MPH) (Health Ed.)	1 ea.	50	-		
(MPH) (Health Ed.) (Nurse)	1 ea.	67	-		
(M.Sc.) Educ. Science (Nurse)	1 ea.	67	-		
(Educ. Techniques) (2/yrX3 yr X 4 mo.)	24 pm	138	-		
		322	-		
4. (CHW/AHW Preservice Training)	22000	-	8583		
(CHW/AHW In-service Training)	96000	-	4451		
(TBA Training)	12000	-	4037		
(S/D Training Teams)	15 teams	-	1765		
(VTPC and VHC Orientation)	2700 counselors	-	425		
(Materials Prpduction)		-	1155		
		-	20416		
B. Health Information Service					
1. Technical Assistance	37 pm	211	-		
2. Participant Training (MPH Bio Statistics)	1 ea.	50	-		
(M.Sc. Computer Science)	1 ea.	50	-		
(MPH Health Statistics/ Demography)	1 ea.	35	-		
3. Studies, Surveys, and Workshops		-	552		
HIS Personnel	26	-	1730		
		346	2282		

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS			MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
Project Inputs (D-1)	Implementation Target (Type and Quantity) (D-2)	FX ($000)	LC (K000)	(D-3)	Assumptions for providing inputs: (D-4)
C. DOH Management/Supervision					
1. Participant Training					
(PhD.-Health Admin.)	1 ea.	99	-		
(MPH - Health Admin.)	1 ea.	50	-		
(MPH - Three - MCH)	3 ea.	150	-		
(PhD.-Epidemiology)	1 ea.	99	-		
(MPH-Epidemiology)	1 ea.	50	-		
(M.Sc.-Environmental Science)	1 ea.	50	-		
Short-term					
(MCH)	24 mos.	138	-		
(Health Planning/Management)	18 mos.	105	-		
(Environmental Health)	4 mos.	23	-		
		764	-		
2. (Project Headquarters staff)	3 persons	-	128		
(BHS Staff bicycles)	4650 ea.	-	4650		
(Building construction)					
(Nutrition)	1 ea.	-	3000		
(Warehouse)	1 ea.	-	330		
(Family Health Counseling)	1 ea.	-	500		
(Logistics Staff)	3 persons	-	54		
		-	8662		

Date Prepared: 2/20/83

PAGE

PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK

Project Title & Number: PRIMARY HEALTH CARE II (482-0004)

Life of Project: From FY 83 to FY 85
Total U.S. Funding $10.6 million
Date Prepared: [illegible]/83

NARRATIVE SUMMARY Project Purpose (D-1)	OBJECTIVELY VERIFIABLE INDICATORS Implementation Target (Type and Quantity) (D-2)		MEANS OF VERIFICATION (D-3)	IMPORTANT ASSUMPTIONS Assumptions for providing inputs: (D-4)
		FX ($000) LC (K000)		
D. Family Health Counseling				
1. Technical Assistance	28 pm	446 -		
2. Commodities				
(Paper, ink, stationery)	-	200 -		
(Clinic equip.)	225 ea.	450 -		
(Contraceptives)	r	1300 -		
(Medical kits)	225 ea.	117 -		
(IUD)	-	100 -		
(Office equipment)	1 set	130 -		
(Library books)	1 set	5 -		
		2202 -		
3. Participant Training				
(Observation tours)	12 pm	30 -		
(Management Training)	6 pm	30 -		
(MPH - Family Health Counseling)	2 ea.	100 -		
(Training of Trainers)	4 pm	23 -		
(Unspecified Short-term)		30 -		
		213 -		

NARRATIVE SUMMARY Project Inputs: (D-1)	OBJECTIVELY VERIFIABLE INDICATORS Implementation Target (Type and Quantity) (D-2)			MEANS OF VERIFICATION (D-3)	IMPORTANT ASSUMPTIONS Assumptions for providing inputs: (D-4)
		FX ($000)	LC (K000)		
4. (Furniture, Equipment, Supplies)	1 set	-	188		
(Training) (Clinic personnel)	450	-	1048		
(Training Materials)		-	150		
(Studies/Surveys)		-	375		
(Salaries) (Headquarters)	10	-	375		
		-	2136		
E. Evaluation	Mid-term & End of Project	200	-		
F. Contingency		744	504		
		10000	34000		

APPENDIX B

C. HEALTH STATUS STATISTICS

Table 1
Selected Demographic and Vital Statistics

Population (1986-87)	37.85 million
Percent Urban (1983)	24.0 *
Crude Birth Rate (1986 - provisional)	28.5
Crude Death Rate (")	8.5
Rate of Population Growth (1986-87)	1.98
Infant Mortality Rate (1986 - provisional)	44.5
IMR (AID Health Information System May 87)	66.0
Child (1-4) Mortality Rate (1985)	7.0 **
Maternal Mortality Rate (1986 - provisional)	1.0
Still Birth Rate (")	10.7
Abortion Rate (1985)	72.0 ***

Source : SRUB Report to the Pyithu Hluttaw for 1987/88
* Source : UNICEF Situation Analysis of Women and Children, 1986
** Source : Vital Statistics Report, CSO
*** Source : UNICEF Situation Analysis of Women and Children, 1986

Table 2
The Magnitude and Distribution of Stillbirths by Year and Region

Year	SBR	State/Divisions	SBR
1955	40.2	Mandalay	15.5
1960	37.6	Shan	13.6
1965	24.0	Magwe	13.4
1970	16.2	Kachin	12.0
1971	16.7	Chin	11.9
1972	16.6	Sagaing	11.9
1973	13.7	Pegu	10.4
1974	13.1	Rangoon	9.8
1975	12.0	Rakhine	8.6
1976	12.1	Kayah	7.5
1977	12.3	Mon	7.3
1978	11.0	Karen	7.0
1979	12.4	Tenasserim	6.6
1980	10.5	Irrawaddy	6.2

Source : Central Statistics Organisation

Table 3

Perinatal Mortality Rates in Burma (1970-80)

Year	PMR
1970	33.7
1975	27.4
1980	24.2

Source : Central Statistical Organisation

Table 4

Causes of Perinatal Mortality in Rural Areas, 1978

	Causes of PM	Number*	Percent*
1.	Prematurity & LBW	169	62.5
2.	Anoxia/Asphyxia	107	39.6
3.	Infections	43	15.9
4.	Birth injusries	14	5.2
5.	Cerebral haemorrhage	8	3.0
6.	Congenital abnormalities	7	2.6
7.	END cause unknown	4	1.5
8.	SB cause unknown	55	20.4

Source : Perinatal and Low-birth Weight Study, 1978

* The total of the two columns do not add up to 270 or 100% because cause classifications are not mutually exclusive.

Table 5

Causes of Neonatal Mortality in 146 Towns, 1980

Causes Neonatal Mortality	ENM 7d	LNM 7-28d	NM 1m	%
Conditions originating in perinatal period	1533	626	2159	42.6
Ill-defined conditions	486	392	878	17.3
Infections and Parasitic diseases	250	605	855	16.9
Intestinal infective diseases	89	422	511	10.1
Acute respiratory infections	140	181	321	6.3
Tetanus	93	101	194	3.8
Congenital anomalies	49	14	63	1.3
Diseases of the circulatory system	29	6	35	0.7
PEM (all forms)	6	1	7	0.7
Tuberculosis (all forms)	1	5	6	0.1
Malaria	4	1	5	0.1
TOTAL	2694	2373	5069	100.0

Source : Central Statistical Organisation

Table 6

Infant Deaths by Cause in 146 Towns, 1980

	Cause of Death		Number of deaths	%
1.	Ill-defined conditions		2435	26.6
2.	Conditions originating in perinatal period		2358	25.7
3.	Other infections		1487	16.2
4.	ARI		1253	13.7
	(a) Pneumonia	1203		
	(b) Bronchitis emphysema, Asthma	50		
5.	Intestinal Infections diseases		958	10.4
6.	Tetanus		220	2.4
7.	PEM all forms		123	1.3
8.	Congenital anomalities		91	1.0
9.	Disease		72	0.78
10.	Meningitis		61	0.67
11.	Malaria		30	0.33
12.	Tuberculosis		28	0.33
13.	Accidents and violence		18	0.20
14.	Measles		14	0.15
15.	Anaemia		14	0.15
16.	Whooping cough		10	0.10
17.	Malignacies		2	0.02
	TOTAL		9164	100.00

Source : Central Statistical Organisation

Table 7

Ten Leading causes of Infant Mortality treated in (479) Hospitals,1982

	Cause Group	No. of deaths	%
1.	Pneumonia	1120	26.1
2.	Intestinal infections diseases	496	11.6
3.	Slow fetal growth, fetal mal-nutrition & immaturity	496	11.6
4.	Other disorders originating in the perinatal period	432	10.0
5.	Tetanus	192	4.5
6.	Pyrexia of unknown origin	176	4.1
7.	Other diseases of respiratory system	144	3.3
8.	Septicaemia	80	1.9
9.	Meningitis	80	1.9
10.	Bronchitis, chronic and unspecified emphysema and asthma	80	1.9
11.	All other deaths	992	23.1
	TOTAL	4288	100.0

Source : HIS, DOH

Table 8

Age Specific Mortality Rate

Age group (years)	1970	1975	1980	1985*
1	68.2	51.2	36.2	-
1-4	12.6	13.1	7.5	7.0
5-9	3.1	4.4	2.5	3.0
10-14	1.8	1.7	1.3	2.0

Source : Vital Statistics Report, 1970, 1975, 1980 - CSO
* Estimates

Table 9

Ten Leading Causes of Child (1-4yrs) Mortality in (479) Hospitals, 1982

	Cause Group	Death	Percent
1.	Ill defined intestinal infections	944	21.1
2.	Pneumonia	944	21.1
3.	Other Protein-Calorie Malnutrition	448	10.1
4.	Malaria	432	9.7
5.	Other diseases of respiratory system	208	4.7
6.	Pyrexia of unknown origin	96	2.2
7.	Intestinal obstruction without mention of hernia	80	1.8
8.	Helminthiasis	64	1.4
9.	Meningitis	64	1.4
10.	Other diseases of the digestive system	64	1.4
11.	All other deaths	1222	25.1
	TOTAL	4466	100.0

Source : HIS, DOH

Table 10
Ten Leading Causes of 5-14 year Child Mortality in 470 Hospitals, 1982

	Cause Group	Deaths	Percent
1.	Malaria	672	20.4
2.	Pneumonia	384	11.6
3.	Tetanus	272	8.3
4.	Ill-defined intestinal infections	256	7.8
5.	Pyrexia of unknown origin	176	5.3
6.	Other viral diseases	144	4.4
7.	Other diseases of respiratory system	128	3.9
8.	Meningitis	80	2.4
9.	Other protein calorie malnutrition	80	2.4
10.	All other deaths	1106	33.5
	TOTAL	3298	100.0

Source : HIS, DOH

Table 11
Distribution of Maternal Mortality Rate by Year and Regions (1985)

Year	MMR	State/Division	MMR
1960	4.2	Karen	5.9
1970	1.8	Sagaing	3.2
1971	1.8	Rakhine	2.8
1972	1.7	Kachin	2.2
1973	1.6	Irrawaddy	1.9
1974	1.5	Pegu	1.3
1975	1.4	Magwe	1.2
1976	1.6	Rangoon	1.1
1977	1.4	Tenasserim	0.9
1978	1.5	Mandalay	0.9
1979	1.4	Chin	0.9
1980	1.3	Kayah	0.8
1982	1.0	Mon	0.4
1984	1.0	Shan	0.1

Source : Central Statistical Organisation

Table 12

Maternal Deaths by Cause Group in 146 Towns, 1980

	Cause Group	Deaths	Percent
1.	Complications following abortions and Ectoptic & Molar pregnancies	94	39.2
2.	Post-partum haemorrhage	38	15.8
3.	Hypertensive complications	29	12.1
4.	Complications during labour	29	12.1
5.	Pueperial Infections	16	6.7
6.	Ante-partum haemorrhage	13	5.4
7.	Complications during pueperium	11	4.6
8.	Complications during pregnancy	7	2.9
9.	Other complications	3	1.2

Source : Central Statistical Organisation

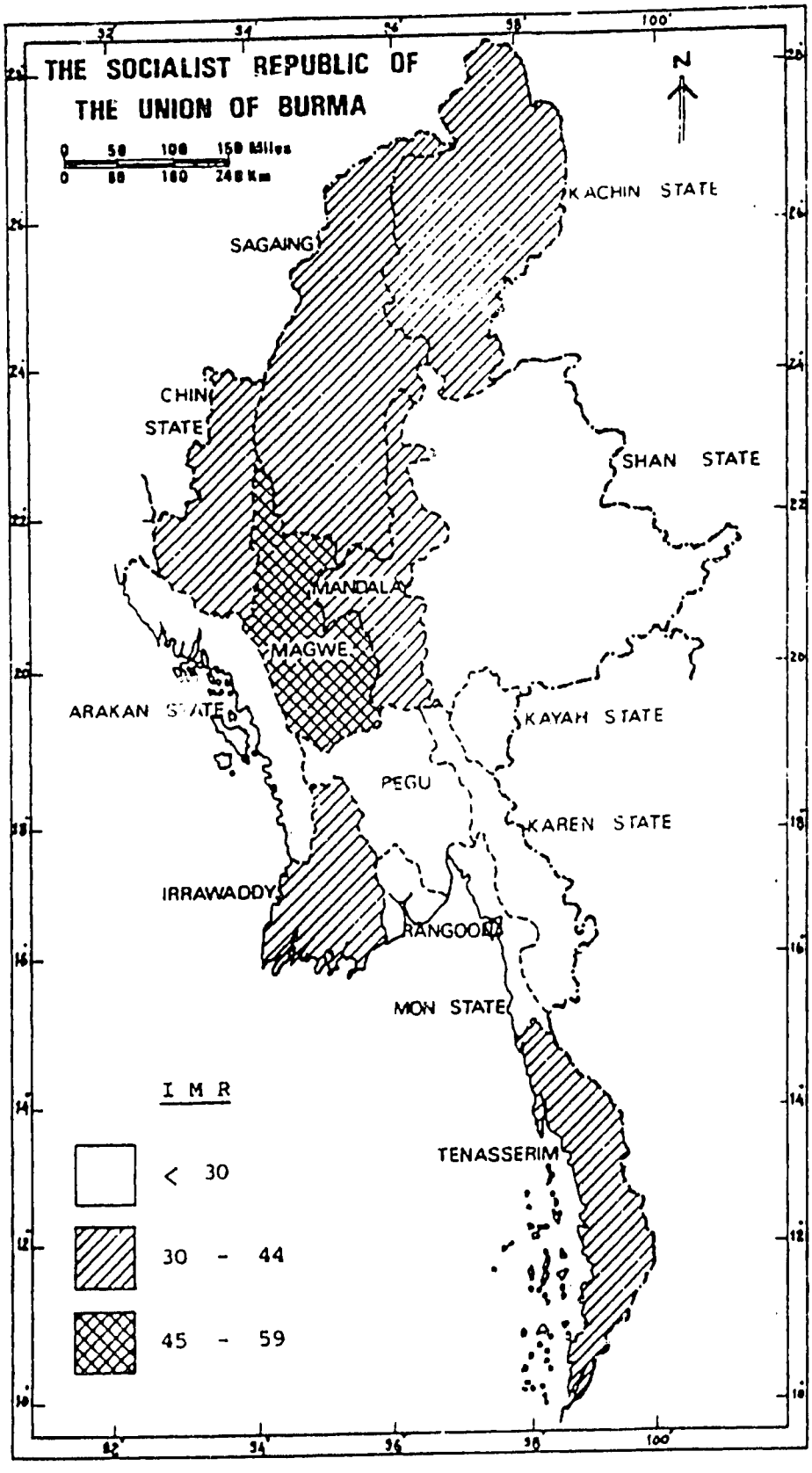
Table 13

Maternal Mortality by Cause Group at the Central Women's Hospital Rangoon, 1984

	Cause Group	No. of cases	No. of deaths	MMR/1000 live births
1.	Abortions	9735	16	2.0
2.	Haemorrhages	499	5	0.6
3.	Toxaemias	327	6	0.7
4.	Pueperal infections	109	3	0.4
5.	Pulmonary Embolism	2	2	0.2
6.	Medical conditions	74	12	1.5
7.	Stillbirth	459	-	-
8.	Uncomplicated live birth	8001	-	-
	TOTAL	18828	44	5.5

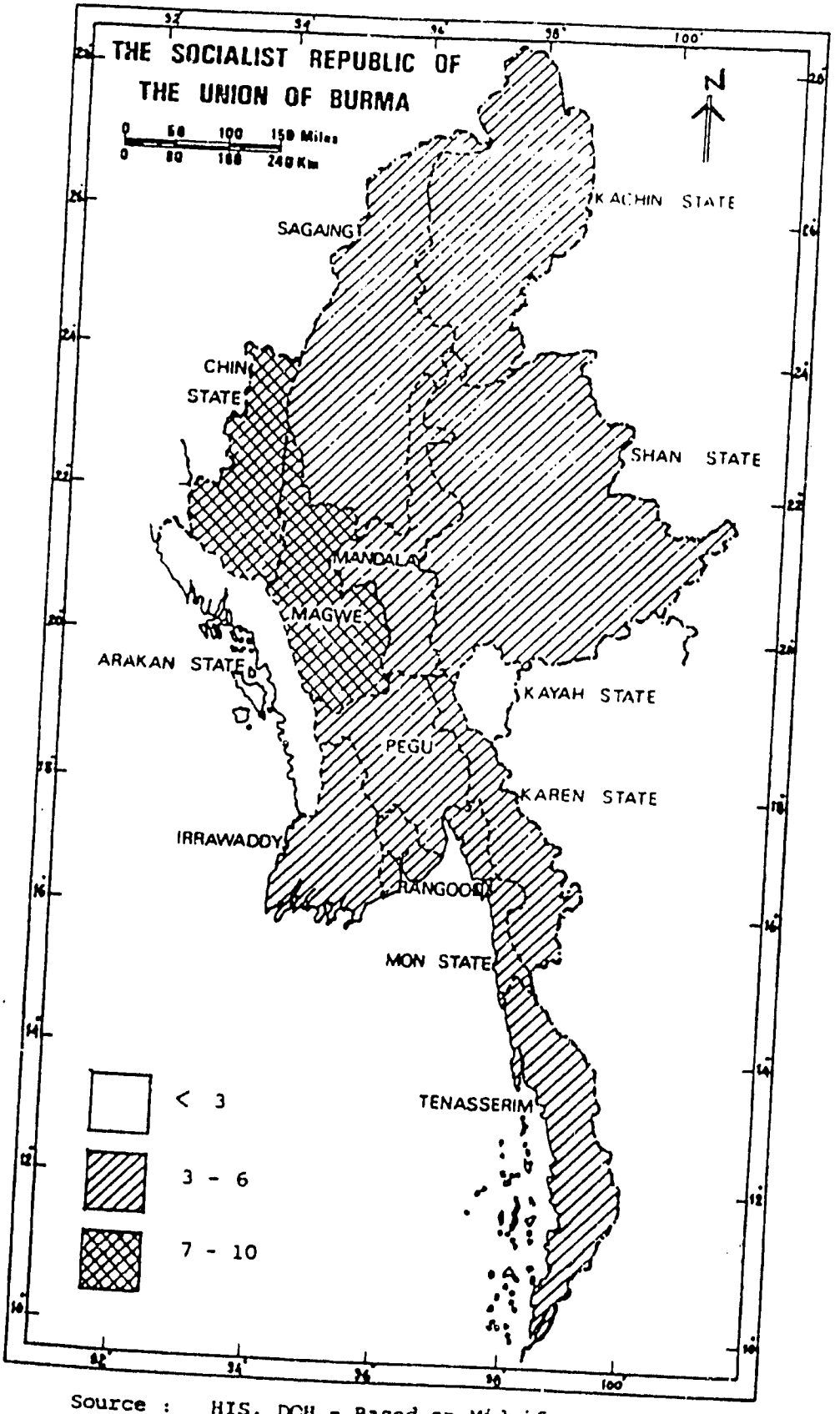
Source : Central Women's Hospital Rangoon

Fig. 3 Distribution of IMR by Regions, 1985



Source: HIS, DOH - Based on Midwife Reporting

Fig. 4 Distribution of 1-4 year Age Specific Mortality Rates by Region, 1985



Source : HIS, DCH - Based on Midwife Reporting.

APPENDIX C

PRIMARY HEALTH CARE II PROJECT COMMODITY STATUS REPORT (482-0004)

AS OF AUG. 11, 1987

Project Start Dt: Aug. 19, 1983
Project End Dt: Jun. 30, 1989
File: PHCII on Wang

No.	PIO/C#	Issued Date	Commodity	PIO/C Earmarked Amt. Value US$	Actual Amt. Procurement Completed	Carrier	Qty Ordered	Qty Shipped	Remarks
1.	30022*	10/23/84	Rural Health Sub Kit	72,282.00	59,470.39	Burma Five Star	1,120	1,120	UNICEF IV# 13105 ETA. Rgn 4/27/85, each kit $43.29, 18 items
2.	30023*	10/23/84	Community Health Workers Kits	889,082.00	784,934.72		8,400	8,400	$43.29, 18 items $82.69, 24 items
3.	30024*	10/23/84	Traditional Birth Attendant Kits	148,838.00	115,657.00	Mergui (BFSL)	12,000	12,000	$9.69, 9 items ETA. Nov. 3/85, BL HC-3
4.	30025*	07/05/84	Auxiliary Midwives Medicine Kits	500,111.00	349,305.00	Mergui (BFSL)	5,600	5,600	UNICEF issue order #71972, $52.28, 11 items
5.	30026*	10/23/84	Auxiliary Midwives Kits	135,771.20	128,642.00		2,800	2,800	Increasing $20,689.20 $32.11, 33 items
6.	30027*	10/23/84	Rural Health Centre Kits	117,923.00	60,954.00		280	280	$329.03
7.	30028*	10/23/84	Salter Type Scales	224,486.00	105,395.00	Anna Copenhagen Bassein Hamburg	6,000 pcs	6,000 pcs	85 cartoon scale, 100, 548.60 $16.27 IV#13810(UNICEF) 4/26/85
8.	30029*	08/08/84	Auxiliary Midwives Carrying Case	80,811.40	78,711.00	PRS/Roosevelt V 003 2,14/85	7,700 pcs	7,700 pcs	B/L 169533, GSA, $7.00 WCA7138 WCA 7138 3/5/85 Cable setstate 240089, $4.95, $11,335.89
9.	30030*	08/09/84	Infant Spring Scales	109,200.00	65,438.00		12,000 pcs	12,000 pcs	
10.	30031	07/05/84	Station Hospital Equipment and Minor Surgical Set	287,450.00	117,504.00	Kiso Maru	40 sets	40 sets	40 Generator sets $13,974.12, 85 cartoon, XPN-B 5/6/85, Battery 1.5V, 24 ea WCA 7475, 21, 709.71 Minipump WCA 7512

No.	PIO/C#	Issued Date	Commodity	PIO/C Earmarked Amt. Value US$	Actual Amt. Procurement Completed	Carrier	Qty Ordered	Qty Shipped	Remarks
11.	30032	10/15/84	CJ-8 AMC Jeep	276,894.00	217,967.00		18 CJ-8 Pickup 1 CJ-8 Wagon		18 CJ-8 pickup, 1 CJB Wagon shipment not later than first week of August 1985
12.	30057	12/27/84	Ohmeda Cyprane Anaesthesia	54,500.00	46,191.04		52 unit		As per invoice amount
13.	30058	01/09/85	Household Furniture	14,963.00	13,804.00	Pagan 4/24/85	1 Lot		Cleared Customs BL 15
14.	30059	01/09/85	Household Appliance	11,037.00	9,972.00	Pa-an V. 81 3/22/85	1 Lot		5/3/85 stored at DOH/USAID/ w/house. IV# 112489, IV# 851570 5/16/85, 7 Aircons.
15.	30060*	02/04/85	AID-Emblems	500.00	479.21	3/11/85	D-2 = 4,000		Invoice #003116
16.	30074*	06/18/85	AID-Emblems	5,000.00	4,672.00	Pouch 8/14/85	D-2 = 50,000		Invoice #003277 8/14/85
17.	30079	08/08/85	W/house equipment & Supplies	7,832.43	7,122.00				
18.	30085	04/08/86	Office Materials and Warehouse Appliances	10,810.00			Lot		In Clearance
19.	30086*	04/22/86	Racor Fuel Filters	960.00	960.00		6 Elements		Procurement completed
20.	30088	04/22/86	Computer Purchase	102,623.00	48,943.00		Lot		
21.	30094	07/22/86	Entomology Supplies	15,000.00	13,997.00				V.BDC
22.	30095		Books & Mat. for VBDC Ref.	6,000.00					
23.	30104	11/3/86	Standby Power Source	1,600.00	1,637.00				V.BDC
24.	30108	1/23/87	Computer Equipment & Supplies	53,680.00					Unliquidated
25.	40015	11/12/85	Rural Health Center Kits	51,200.00	42,805.00		200 kits		

No.	PIO/C#	Issued Date	Commodity	PIO/C Earmarked Amt. Value US$	Actual Amt. Procurement Completed	Carrier	Qty Ordered	Qty Shipped	Remarks
26.	40016	11/12/85	Rural Health Subcenter Kits	384,000.00	314,928.00		5000 kits		
27.	40017	11/12/85	Auxiliary Midwife Kits	377,150.00	309,225.00		5000 kits		As per invoice received
28.	40018	11/12/85	Health Assistant's Kits	75,000.00	68,363.29		1000 kits		As per invoice received
29.	40019	11/12/85	Public Health Supervisors Kits	192,000.00	133,691.32		3000 kits		
30.	40020	11/12/85	Community Health Workers	435,200.00	282,392.00		4000 kits		
31.	40021	11/12/85	Ringer's Lactate & Infusion Sets	403,840.00	403,840.00		150,000 sets		182 Pkts as per invoice received
32.	50062	6/23/87	RHC Medical Kits	648,000.00			12,200 kits		
33.	50080	6/11/86	Audio Visual						
			A. School Supplies	53,492.74					
			B. Office Supplies	76,049.00					
			C. Office Supplies & Paper	12,259.26					
			D. Plywood 8'x4'x3/4"=1100sht	10,208.00					
			E. Honda Generator 15 Nos	21,750.00					
			Total:	$ 5,867,503.03	3,080,999.97				

Note: *Procurement completed

APPENDIX D

BURMA/USAID
PRIMARY HEALTH CARE II PROJECT
KYAT EXPENDITURE
1983/84 - 1986/97

PARTICULAR	ESTIMATED	ACTUAL EXPENDITURE
I. VHW TRAINING		
a). Preservice	8,582,800	10,449,169/69
b). Inservice	1,150,500	5,218,353/70
c). Letthe Training	5,063,400	4,609,033/04
d). S/D Trg. Teams	1,718,200	526,077/42
e). VPC orientation	378,000	376,064/10
f). Material Prod:n.	945,000	755,769/47
	21,137,900	21,934,487/33
II. HEALTH INFORMATION SERVICE		
a). Studies, surveys	552,000	609,940/00
b). HIS Personnel	243,000	110,371/50
c). Offset Personnel	59,000	47,774/50
d). S/D HIS Personnel	310,100	401,012/63
e). Rangoon Workshops	71,400	36,000/00
f). Incentives	660,000	360,266/90
Sub-Total	1,895,500	1,585,365/53
III. DOH MANAGEMENT		
a). Headquarter	110,500	226,623/25
b). Logistic staff	47,100	18,104/99
c). Bicycles	4,650,000	2,683,838/90
d). Buildings	3,300,000	7,521,600/00
	8,137,600	10,480,167/14
IV. Reserved	2,278,000	
V. Contingency	551,000	
Total	34,000,000	34,000,000/00

STAFF APPOINTED UNDER PHC II PROJECT USING KYAT FUNDS

			PLAN	ACTUAL
A.	STATE/DIVISION TRAINING TEAMS (SDTT)			
	1.	Medical Officer	15	-
	2.	Public Health Nurse	17	17
	3.	Driver	15	13
B.	HEALTH INFORMATION SECTION			
	1.	State/Division Stat. Technician	15	15
	2.	Central Office Stat. Technician	6	6
	3.	Computer Staff (1 Engineer and 2 Programmers)	3	3
	4.	Offset Staff (Printer, Photographer, Binder, Worker)	7	7
C.	PROJECT HEADQUARTERS			
1.	Medical Officer	2	-	
	2.	Accountant	1	1
	3.	Public Health Nurse	2	2
	4.	Stat. Technician	2	2
	5.	Asst. Accountant	2	2
	6.	Secretary/typist	2	2
	7.	Driver	3	3
D.	LOGISTICS			
	1.	Logistic Officer	1	1
	2.	Asst. Logistic Officer	2	2
		Total	95	76

APPENDIX E

VHW PLANNED AND ACTUAL PRE-SERVICE TRAINING

YEAR	CHW		AMW		TBA		VPC	
	PLAN	ACT	PLAN	ACT	PLAN	ACT	PLAN	ACT
1983/84	2666	2615	901	899	4000	3635	6415	5832
1984/85	2666	2617	907	900	4000	3291	6850	6415
1985/86	6668	6668	893	892	4000	4060	6668	6627
TOTAL	12000	11900	2701	2691	12000	10986	19933	18874
(%)		(99.2 %)		(99.6 %)		(91.5 %)		(94.7 %)

APPENDIX F

CHW AND AMW PLANNED AND ACTUAL IN-SERVICE TRAINING

CHW IN-SERVICE TRAINING (1983 - 1986)

Sr. No.	STATE/DIVISION	TSps.	1983-84		TSps.	1984-85		TSps.	1985-86	
			P	A		P	A		P	A
1	KACHIN	11	425	343	13	461	351	16	489	419
2	KAYAH	6	94	72	6	108	63	6	122	79
3.	KAREN	6	312	238	7	327	269	7	336	266
4.	CHIN	6	371	308	8	517	432	9	592	504
5.	SAGAING	23	2111	1940	28	2568	2305	33	3125	2886
6.	TENESSERIM	6	383	318	7	477	441	8	543	383
7.	PEGU	17	2108	1975	20	2623	2445	24	3207	2990
8.	MAGWE	16	1866	1786	19	2195	2079	22	2427	2312
9.	MANDALAY	17	2063	1917	21	2533	2393	25	3175	3010
10.	MON	10	498	430	10	584	510	10	659	587
11.	ARAKAN	11	1306	1036	13	1543	1283	15	1765	1466
12.	RANGOON	20	2113	1828	26	2672	2383	32	3229	2890
13.	SHAN	22	1078	966	32	1466	1218	42	1714	1471
14.	IRRAWADDY	16	3330	3138	19	4262	3786	22	5028	4785
	TOTAL	187	18058	16295	229	22336	19958	271	26411	24048

APPENDIX F (CONTINUED)

AMW IN-SERVICE TRAINING

Sr. No.	STATE/DIVISION	1983-84 Tps.	1983-84 P	1983-84 A	1984-85 Tps.	1984-85 P	1984-85 A	1985-86 Tps.	1985-86 P	1985-86 A
1.	KACHIN	9	226	171	3	33	34	16	326	253
2.	KAYAH	5	28	20	-	-	-	5	26	23
3.	KAREN	5	190	158	2	26	24	7	263	230
4.	CHIN	5	144	119	2	9	9	8	186	171
5.	SAGAING	19	635	579	5	108	81	33	1094	1004
6.	TENESSERIM	5	69	66	2	13	13	8	133	98
7.	PEGU	14	415	384	4	117	94	24	980	913
8.	MAGWE	13	488	464	4	120	114	22	1068	983
9.	MANDALAY	14	557	495	4	162	139	25	1118	1039
10.	MON	10	207	179	3	27	27	10	246	223
11.	RAKHINE	9	338	287	5	145	126	15	716	580
12.	RANGOON	14	359	346	2	60	63	16	589	521
13.	SHAN	12	331	304	10	128	114	41	703	600
14.	IRRAWADDY	13	613	566	5	142	136	23	1227	1139
	TOTAL	147	4600	4138	51	1090	974	253	8673	7777

Appendix G:

Officials Contacted

Department of Health

Dr. U Tin U, Director General

Public Health

Dr. U Ba Tun, Director, Public Health, and Director PHP
Dr. U Mya Win, Deputy Director (RH/SH/MCH)
Dr. U Thein Swe, Assistant Project Director (PHP)
Dr. Daw Khin Tar Tar, Assistant Project Director (FHC)
Dr. Daw Tin Tin Win, Assistant Project Director (FHC)
Dr. U Soe Tint
Dr. U Htay Win

Nutrition

Dr. Thyra Po, Assistant Director

Health Education

U Min Swe, Assistant Director

Dr. Yin Yin May

Environmental Sanitation

U Mying, Assistant Director

Training and Foreign Relations

Dr. Thein Dan, Deputy Director
Dr. Thein Tun Sein, Training Officer

Vector Borne Disease Control

Dr. U Nyunt Hlaing, Deputy Director (Malaria)
U Saw Marcus Winn, Senior Entomologist

Health Information Service (HIS)

Daw Htay Htay Aye, Senior Statistician
U Than Lwin, Statistical Officer
Dr. Daw Khin Mya May, Medical Officer

Health Assistant Training School (HATS)

Dr. C. Hla Shein, Director
Dr. C. Khine Ming, Senior Lecturer
Dr. Kyi May Thein, Lecturer

Aung San Demonstration Health Unit and Training Center, Hlegu Township

Dr. Sein Lwin, Acting Team Leader
Dr. Ye Myint, Deputy Team Leader

Pegu Division

Dr. U Kyaw Yin, Director
Dr. Myat Khine, Deputy Director
Dr. Nay Lin, Senior Medical Officer
Dr. Myint Myint Yee, Township Health Officer

Mandalay Division

Dr. U Kyaw Sein, Director
Dr. Khin Myo Myint, Divisional Health Officer (EPI)
Dr. Kyin San Yin, Divisional Health Officer, School Health and Nutrition
U Tha Din, Health Educational Officer
Dr. Ye Hle, Division THO (PHP & Training)

Singaing Station Hospital

Dr. Daw Khin Win Swe, TMO
Dr. Daw Hla Myo Khin, Medical Officer, St. Hospital
Daw Issabelle Sein, LHV
Daw Khin Pyu Win, MW
Daw Htwe Kyie, MW
Daw Pearl, AMW
Ma Win Kyi, AMW
Ma Khin Lay, AMW
Ma Nu Kyin, AMW
Ma Htay Kyi, AMW
Ma San San Htay, AMW
Ma Than Than Wai, AMW
Maung Maung Kyin, PHS II
Saw Hti Mu, PHS II

Yewun RHC, Myit Tha Township

Dr. Tun Kyi, TMO
U Hla Kywe, HA
U Myo Myint, HA
Maung Win, CHW
Maung Hla Win, CHW
Maung Htay Aung, CHW

Shaw Bin Subcenter

Ma On Mar Lwin, MW

Maung Aung Lee, CHW
Ma Kyi Kyi Htay, AMW

Meiktila Township

Dr. Tint Naing, TMO
Dr. Ma Shu Kyi, Team Leader, Urban Health Center
Dr. U Tin Sein, Urban Medical Officer

Magyedine RHC, Kyaukpadung Township

Dr. Thinn Maung, TMO
U Khin Maung, HA
U Myein, Chairman, Village Council
Ma Khin Thein Yi, AMW
Ma Kyol Kyee, AMW
Ma Kyin Von, AMW
Ma Mya Mya San, AMW
Maung Shaung Lin, ChW
Maung San Myint, CHW
Ma Hnin Yi, AMW

Sebauk Subcenter, Popa Township

Paw Then Nwe, LHV
Daw Thein Thein, MW
Ma Khin Nwe, AMW
Ma Mya Sein, AMW
Ma Ohn Myint, AMW
Ma Thein Myint, AMW
U Htay Win, CHW

Nuaung U Township
U Myint Thaung, TMO

Wet-Kyi Inn Sub-Center (Pagan RHC)

U Aye Maung, President, People's Council
U Kyaw Yin, Party Representative
U Mya, Pagan RHC
Daw Than Than Win, LHV, Pagan RHC
Daw San San Htay, MW, Wet-Kyi Inn
U Aung Than, PHS-2
U Sein Win, PHS-2
Ma Mya Ngwe, AMW
Ma Kyu Kyu, AMW
Daw Hla Thi, TBA
Ma Myint Myint Sein, CHW
Maung Myint Thein, CHW
Maung Htay Win, CHW
Maung Aye Lwin, Ten Household Health Worker (THHW)
Maung Aye Ko, THHW
Khin Maung Tin, THHW
Ma Aye Kyi, THHW
Ma Khin San Way, THHW

Khin San Linn, THHW
Ma Myint Myint Kyi, THHW

Sagaing Division

Dr. Kyaw Win, Director
Dr. Mya Than, Deputy Director
Dr. Than Tun Oo, THO (Team Leader, SDCP)
Dr. Zaw Pe Khin, Team Leader, VBDC
Dr. Than Hlaik, TMO
Dr. Aung Moe, THO
Daw Win Mar, Divisional Statistician

Saduang RHC

U San Aung, HA
Daw Khin Win, LHV
Daw Khin Myint Shwe, MW
Daw Khin Nyunt Yi, AMW
U Thaung Shein, CHW
U Ba Lwin, People's Council Chairman

Kyawzeyar Village

U TIn Myint, CHW
Daw Kyaing, TBA
Daw Hla Win Swe, AMW

Western Consortium for the Health Professions, Inc. (April)

Dr. Ray Carlaw, Team Leader
Dr. Roger Detels, Operations Research Consultant (UCLA)
Dr. Harold Gustafson, Operations Research Consultant (UC Berkeley)
Dr. Ralph Frerichs, Rapid Survey Consultant (UCLA)
Dr. Robert Miller, Western Consortium

Agency for International Development (April)

Mr. Earl J. Young, Director (April, August)
Dr. John Naponick, Health Development Officer
Mr. Terry Barker, Program Officer

Appendix H:

Evaluation Team Schedule

Phase I (Reynolds)

Friday, April 24: Arrive Rangoon, informal meetings with John Naponick and Ray Carlaw.

Saturday, Sunday, April 25-26: Reading.

Monday, April 27: Briefings with Ray Carlaw, Terry Barker, John Naponick. Meetings with Hal Gustafson, Earl Young, Ralph Frericha and Roger Detels regarding consultant activities. Informal discussions with Dr. U Ba Tun, Dr. U Mya Win, Dr. U Than Sein.

Tuesday, April 28: Meeting with John Naponick re scope of work. Attended Western Consortium end-of-project presentation at Department of Health. Informal meetings with Ray Carlaw and Western Consortium consultants re project evaluation.

Wednesday, April 29: Attended Western Consortium PHC II debriefing and workshop. Meetings with Naponick and Barker re draft outline of evaluation report; meeting with Carlaw to discuss scope of work, discussion with Frericha about Rapid Survey methodology.

Thursday, April 30: Depart Rangoon.

Phase II (Reynolds and Petrich)

Monday, August 10: Reynolds and Petrich arrive.

Tuesday, August 11: Briefing by PHC Committee at Department of Health. Reading and organization of materials and assignments.

Wednesday, August 12: Visit to H.A.T.S. Meeting with HIS Personnel. Reading, preparation of report outline.

Thursday, August 13: Meeting with Deputy Director, Training. Meeting with Assistant Director, Nutrition. Meeting with Deputy Director, Malaria. Reading.

Friday, August 14: Travel to Pegu Division. Meeting with Division health officers regarding test of minimum data set. Visit to Aung San Demonstration Health Unit and Training Center. Reading, drafting of introduction and appendices of report.

Saturday, August 15: Reading and continued drafting of introduction and appendices.

Sunday, August 16: Reading and drafting of notes for substantive sections of report.

Monday, August 17: Travel to Mandalay. Meet with Mandalay Division Health staff.

Tuesday, August 18: Travel to Sagaing. Meet with Sagain Division Health staff; visit Civil Hospital to see AMW Training; travel to Sadaung RHC, meet with RHC staff; visit Kyawzeyar Village.

Wednesday, August 19: Travel to Meiktila Township, with stops at Singaing Station Hospital, Yewun RHC (Myit Tha Township), Shaw Bin Subcenter, Meiktila Urban Health Center.

Thursday, August 20: Travel to Pagan with stops at Magyedine RHC (Kyaukpadung Township) and Sebank Subcenter (Popa RHC).

Friday, August 21: Pagan. Visits to Wet-Kyi Inn Subcenter (Pagan RHC), Nuaung U Township Hospital.

Saturday, August 22: Compile notes for report. Travel to Rangoon.

Sunday, August 23: Draft report.

Monday, August 24: Meeting with DOH Health Education; work on report.

Tuesday, August 25: Draft report. Interview returned Participant Trainee. Debriefing for Director General, PHP managers and USAID Director.

Wednesday, August 26: Meeting with Earl Young, USAID. Meeting with Dr. U Ba Tun and PHC staff. Work on report.

Thursday, August 27: Petrich leaves. Work on report. Meeting with Earl Young, USAID. Meeting with Director General, Dr. U Tun U and PHC Staff.

Friday, August 28: Turn in report. Reynolds leaves.