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MID-TERM EVALUATION OF USAID OPG AID/Afr-G-1560

December 1981

AMREF  
PO Box 30125  
NAIROBI

PS/DIU/DI

509-SA-14  
6/5/82

PD-HAL-160  
ISW 2169

CLASSIFICATION  
PROJECT EVALUATION SUMMARY (PES) - PART I

Report Symbol U-447

1. PROJECT TITLE  Kibwezi Rural Health Scheme (AMREF)		2. PROJECT NUMBER 615-0179	3. MISSION/AID/W OFFICE USAID/Kenya
		4. EVALUATION NUMBER (Enter the number maintained by the reporting unit e.g., Country or AID/W Administrative Code, Fiscal Year, Serial No. beginning with No. 1 each FY) <u>615-82-0</u>	
		<input type="checkbox"/> REGULAR EVALUATION <input type="checkbox"/> SPECIAL EVALUATION	

5. KEY PROJECT IMPLEMENTATION DATES			6. ESTIMATED PROJECT FUNDING	7. PERIOD COVERED BY EVALUATION
A. First PRO-AG or Equivalent FY <u>79</u>	B. Final Obligation Expected FY <u>79</u>	C. Final Input Delivery FY <u>83</u>	A. Total \$ <u>1,495</u> B. U.S. \$ <u>818</u>	From (month/yr.) <u>July 79</u> To (month/yr.) <u>Nov. 81</u> Date of Evaluation Review <u>Feb. 82</u>

B. ACTION DECISIONS APPROVED BY MISSION OR AID/W OFFICE DIRECTOR

A. List decisions and/or unresolved issues, cite those items needing further study. (NOTE: Mission decisions which anticipate AID/W or regional office action should specify type of document, e.g., airgram, SPAR, PIO, which will present detailed req. est.)	B. NAME OF OFFICER RESPONSIBLE FOR ACTION	C. DATE ACTION TO BE COMPLETED
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I. Unresolved Issues:

- A. Lack of Methodology for measuring health impact and CHW performance
- B. Lack of definite plan to incorporate Kibwezi Rural Health Scheme with GOK structure.
- C. Question of CHW remuneration.

II. Mission Recommendations:

- A. AMREF establish CHW performance criteria
- B. AMREF delineate linkages between MOH staff and community
- C. AMREF develop method to measure projects' health impact
- D. AMREF to submit budget expenditures broken down by various donors.
- E. AMREF submit revised implementation plan and budget
- F. Mission to review AMREF's revised implementation plan and budget
- G. AMREF to continue explaining to the community their responsibility for CHW support

AMREF	July 1982
AMREF	Continuous
AMREF	August 1982
AMREF	March 1982
AMREF	April 1982
USAID	May 1982
AMREF	Continuous

9. INVENTORY OF DOCUMENTS TO BE REVISED PER ABOVE DECISIONS

<input type="checkbox"/> Project Paper	<input checked="" type="checkbox"/> Implementation Plan as. CFI Network	<input type="checkbox"/> Other (Specify)
<input checked="" type="checkbox"/> Financial Plan	<input type="checkbox"/> PIO/T	
<input type="checkbox"/> Logical Framework	<input type="checkbox"/> PIO/C	<input type="checkbox"/> Other (Specify)
<input type="checkbox"/> Project Agreement	<input type="checkbox"/> PIO/P	

10. ALTERNATIVE DECISIONS ON FUTURE OF PROJECT

A.  Continue Project Without Change

B.  Change Project Design and/or Revise ~~MAX~~ Implementation Plan

C.  Discontinue Project

11. PROJECT OFFICER AND HOST COUNTRY OR OTHER RANKING PARTICIPANTS AS APPROPRIATE (Names and Titles)

Draft: HNP:NMwanzia  
Clearance: HNP:JSlattey (draft)  
PRJ:Tlofgren (draft)  
PROG:RCrist (draft)  
D/DIR:CECostello (draft)

12. Mission/AID/W Office Director Approval

Signature: *ES Herrick*  
Typed Name: Allison B. Herrick, Director  
Date: *6 May 1982*

SUMMARY: Kibwezi Rural Health Scheme (615-0179)

In accordance with USAID OPG AID/afr-g-1560 to AMREF, a mid-term evaluation was scheduled for July 1981. At the request of AMREF, the evaluation was postponed until November 1981 in order to allow the participation of International/African Medical Research Foundation Director.

The evaluation scope of work was submitted to USAID by AMREF on October 26, 1981. The actual evaluation took place in early November 1981. The draft evaluation report was submitted to the Mission on November 19, 1981 and a seminar to discuss the evaluation findings took place on November 20, 1981. The final evaluation report was submitted to the Mission on December 21, 1981. On February 16, 1982, the Mission Project Review Committee reviewed the evaluation report. The results of this meeting were discussed with AMREF staff on February 19, 1982.

Findings and Recommendations

1. AMREF apparently does not have criteria for evaluating the performance of the community health workers (CHWs). Since part of the duties of the CHWs is to teach the community to dig pit latrines, make dishracks, and instruct on cleanliness in homes, it was suggested that performance criteria be developed for these tasks.
2. The Mission noted that if Kibwezi Health Center were to be replicated as a Government of Kenya (GOK) functioning facility, the following issues require further investigation: a) the linkages of formal (MOH Health Center and Staff) and informal (Community and CHWs) systems need to be better defined to ensure effective coordination and relationships between the Health Center and the Community; and b) a method to measure health impact.
3. USAID raised the issue that there is a need for a budget breakdown which would clearly reflect various donor inputs, particularly USAID/Kenya. USAID recommended that AMREF begin submitting such budget breakdowns in their semi-annual progress reports.
4. AMREF's mid-point evaluation provided both USAID/Kenya and AMREF a base of information from which to refocus project activities to meet the project's purpose and goal. The Mission strongly recommended that AMREF re-examine its strategy and decide which activities are essential to ensure replicability.
5. AMREF experienced a high drop-out rate in the first 3 villages where CHWs were first recruited due to misinformation and misunderstanding on remuneration of CHWs. AMREF is overcoming this problem by making sure that CHWs understand that there will be no payment from AMREF or Government.

Draft:HNP:MMwanzia:5/4/82  
Clearance:PRJ:Tlofgren (draft)  
          PROG:RCrist (draft)  
          D/DIR:CECastello (draft)

## TABLE OF CONTENTS

	Page No.
Introduction	1
Purpose and Terms of Grant	1
Purpose of the Mid-term Evaluation	1
Interrelationships of grant overall purpose, objectives and inputs	2
Methodology of Evaluation	3
Background to AMREF	3
AMREF's position prior to USAID grant and position now	4
Utilization of funds and implementation status	5
Direct Inputs : Kibwezi Rural Health Scheme	5
Direct Inputs : Learning Resources	8
Indirect Inputs	10
Salaries	10
Overseas Training	12
Office equipment	12
Field studies, evaluation and dissemination of information	13
Other support cost for New York Office	14
Summary of issues in planning and management	14
Summary of Recommendations	15
Plan of action	16
Extension with additional funds	17
Annex A	Scope of Work
Annex B	USAID Approval to Scope of Work and Consultants
Annex C	Consultant Prof. James Kagia's Report - Kibwezi Rural Health Scheme
Annex D	Consultant Dr Rita Morris' Report
Annex E	Evaluation Report: A contribution to Kibwezi Rural Health Scheme Report by Nelly Mwanzia, USAID
List of Tables	
Table 1	Interrelationship of grant overall purpose objectives and inputs
Table 2	AMREF's position prior to the USAID grant and AMREF's position to date
Table 3	Summary Table of Inputs, Expenditures, Resulting activities/outputs and expected long-term effects
Table 4	Planned Expenditure and re-allocation

## 1. INTRODUCTION

### 1.1 Purpose and Terms of Grant

The overall purpose of the grant is to strengthen the capability of AMREF to plan, manage and evaluate its rural health care services and training programmes in Kenya.

The grant provides a number of diverse inputs which can be divided into two major categories: those contributing directly to specific AMREF project activities in the area of rural health services, and those indirectly supporting the same activities as well as other AMREF rural health services and training projects through supporting AMREF's efforts to strengthen and systematize project management and evaluation at AMREF headquarters. Table 1 shows how overall purpose, primary and secondary objectives, and the inputs provided by the grant relate to one another.

The budgeted direct inputs to the Kibwezi Rural Health Scheme represent about 18% of total funds made available during the first two years of the grant period; direct inputs to Learning Resources are 14%; and indirect inputs strengthening AMREF management use the remaining 68% of the grant. Of the indirect inputs, 25% go to support the operation of AMREF's New York Office.

The detailed terms of the grant are described in various project documents, specifically, the Grant Proposal and the Grant Document which was signed on 19th July 1981.

The generous inclusion of a clause permitting unrestricted adjustments between line items (Attachment 1, item E of Grant Document) should be noted.

### 1.2 Purpose of the Mid-term Evaluation

The terms of the grant call for an evaluation after the second project year. After several discussions between AMREF and USAID Mission staff in Nairobi, a scope of work was drawn up by AMREF (see Annex A and approval granted by USAID (see 3 November 1981 letter, Annex B).

The purpose of the evaluation was to determine to what extent the grant's objectives are being met and to identify areas requiring strengthening and support. Specific goals are stated in the scope of work as follows:

- Clarify objectives of the grant
- Assess planned versus actual activities and accomplishments/results by individual grant component
- Assess structures and processes developed for effective support and evaluation of projects
- Review appropriateness of objectives in light of project experience so far and document what modifications in the grant might be included.

Table 1 INTERRELATIONSHIPS OF GRANT OVERALL PURPOSE, OBJECTIVES and INPUTS

OVERALL PURPOSE

TO STRENGTHEN THE  
CAPABILITY OF AMREF TO  
PLAN, MANAGE AND  
EVALUATE ITS RURAL  
HEALTH CARE SERVICES  
AND TRAINING PROGRAMS  
IN KENYA

PRIMARY OBJECTIVES

1. KIBWEZI RURAL HEALTH SCHEME

Assist GOK/MOH in the development of an integrated and comprehensive rural health service system for Makindu Division, with Kibwezi HC serving as base of operations, utilizing HC staff as well as CHWs at the village level to meet the health care needs of the population in the target area.

2. LEARNING RESOURCES

Assist GOK/MOH in expanding the development and production of teaching materials and learning resources for all its rural health workers, and in the development and execution of training and refresher courses for MOH personnel, especially those involved with the Kibwezi Project.

SECONDARY OBJECTIVES

3. OTHER AMREF RURAL HEALTH PROJECTS

Improve HQ support for rural health projects, including

- outreach services to rural poor, particularly nomadic tribes
- medical radio communications for remote health facilities

4. OTHER AMREF TRAINING PROJECTS

Improve HQ support for training projects

INPUTS

direct

Salaries for Kibwezi HC staff;  
Supplies and selected running costs for Kibwezi HC

indirect

Salaries for some senior and junior AMREF HQ staff;  
Overseas training of 2 junior HQ staff;  
Office equipment for AMREF HQ  
Misc. allowances for field studies and evaluations

direct

Production and distribution of training manuals;  
Production and distribution of health journals/magazines;  
In-service and refresher training courses for Kibwezi HC staff

indirect

Same as above under indirect

Same as above under indirect

Same as above under indirect

### 1.3 Methodology of Evaluation

It was agreed that AMREF staff would have responsibility for putting together the final evaluation report. Two consultants were engaged to carry out objective external review of specific grant components and provide major contributions to the evaluation.

Consultant Prof. Kagia's report on the Kibwezi Health Scheme is attached as Annex C and Dr Morris' report on all other aspects of the grant as Annex D.

Dr Morris' methodology was to use mainly secondary data sources and documentary analysis, supplemented by interviews and discussions with AMREF staff and MOH officials. Prof. Kagia's report is based on documentary analysis, interviews with AMREF staff particularly the Kibwezi project leader, and field visits which included interviews with community health workers, community leaders, other opinion leaders such as teachers and health centre staff.

## 2. BACKGROUND TO AMREF

The African Medical and Research Foundation (AMREF) is an independent non-profit organisation which has been working for more than 20 years to improve the health of people in Eastern Africa, mostly Kenya, Tanzania, Southern Sudan and Uganda. AMREF runs a wide variety of innovative projects with emphasis on appropriate low-cost health care for people in rural areas. Project funds come from government and non-government aid agencies in Africa, Europe and North America as well as from private donors. AMREF is in official relations with the World Health Organisation.

AMREF's current programme includes:

- Primary health care and the training of community workers
- Training of rural health staff through continuing education, teacher training and correspondence courses
- Development, printing and distribution of training manuals, medical journals and health education materials
- Application of behavioural and social sciences to health improvement
- Airborne support for remote health facilities including surgical, medical and public health services
- Ground mobile health services for nomadic pastoralists
- Medical radio communication with more than 100 two-way radios
- Medical research into the transmission and the control of hydatid disease
- Maintenance and repair of medical equipment
- Health project development, planning and evaluation
- Consultancy services in programme areas mentioned above.

Table 2 AMREF's position prior to the USAID grant and AMREF's position to date

No. and Type of Projects

Rural Health	11	22
Surgical, Anaesthesia & Nursing Services	4	4
Flying Doctor Services	7	9
Training	4	6
Printing	1	-
Health Behaviour & Education	3	1
Management Services	4	3
Research	1	2
<b>TOTAL:</b>	<b>35</b>	<b>47</b>

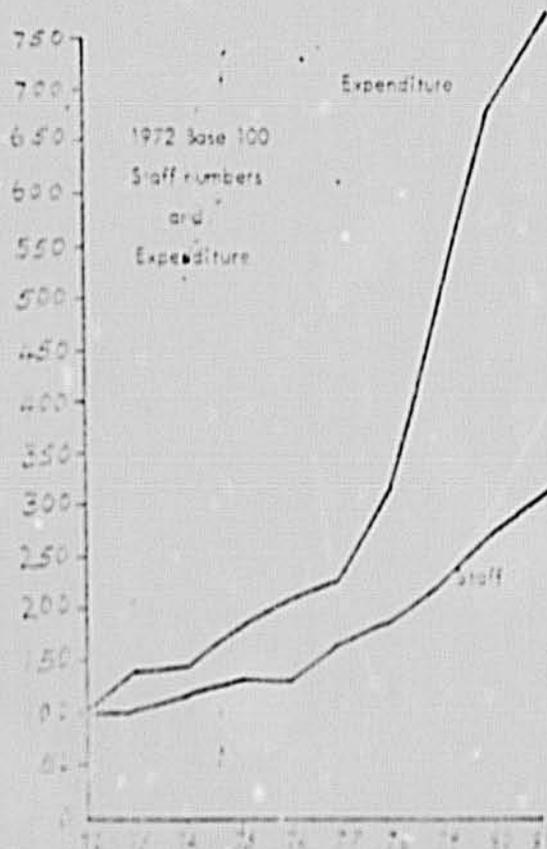
No. of Donor Agencies 48 39

Financial status:

Total project value	KShs.	91,557,475	390,533,055
Amount funded		74,265,325	235,275,045
Funding prospects favourable		14,613,525	122,781,400
Funding prospects uncertain		2,678,625	32,476,610

No. of Employees 107 130

Expenditure and Staff 1972-1981



As can be seen, AMREF has expanded dramatically in the last few years with regard to number of projects, annual expenditure and number of staff. While this grant has been instrumental in assisting AMREF to strengthen and systematize project management, continuing expansion requires further increases and improved efficiency of management staff to ensure that growing workload and increasing complexity of projects are matched by AMREF's implementation and evaluation capability. The accumulated know-how within AMREF is of considerable interest to other organisations and individuals, and additional resources are needed to document findings.

### 3. UTILIZATION OF FUNDS AND IMPLEMENTATION STATUS

In this section rate of expenditure and implementation status are discussed for each grant component, with comments on problems and constraints. Table 3 presents an overview of inputs, expenditure, resulting activities/outputs and expected long-term effects.

#### 3.1 Direct Inputs Kibwezi Rural Health Scheme

Under this component, the following inputs were provided:

- Salaries for Kibwezi Health Centre staff
- Supplies including drugs for Kibwezi Health Centre
- Other selected running costs for Kibwezi Health Centre
- Transport for mobile clinics
- Continuing Education training for Kibwezi division health personnel

Expenditures: Expenditures on this component at end of Project Year 2 were as follows:

	<u>Total Budget for Project Years 1 &amp; 2</u>	<u>Actual Exp. for Project Years 1 &amp; 2</u>	<u>Cumulative Balance for Project Years 1 &amp; 2</u>
Salaries and Allowances	\$ 33,640	12,843.12	20,796.57
Refresher Courses	14,200	3,419.54	10,780.46
Commodities	40,500	1,950.25	38,549.75
Transport for HC outreach program	7,500	6,385.49	1,114.51
Other HC costs	4,875	1,571.17	3,303.83
<b>TOTAL:</b>	<b>\$ 100,715</b>	<b>26,169.57</b>	<b>74,545.43</b>

Under-expenditure in this component is due mainly to the delay in construction of Kibwezi Health Centre, and, to a lesser extent, to the regulation that drugs and medical supplies be of US origin.

Expenditure in the last project year is expected to increase dramatically as the health centre is now fully operational and actual records of health centre running costs show that earlier estimates of expenditure were too low.

Table 3 Summary Table of Inputs, Expenditures, Resulting Activities/Outputs and Expected Long Term Effects

Inputs	Planned Exp. PY 1 and 2	Actual Exp. PY 1 and 2	Balance PY 1 and 2	Planned Exp. PY 3	Total Grant Balance as of 30/9/81	Resulting Activity (Output)	Long Term Effect/Outcome Expected
<b>1. Direct Inputs for Kibwezi II Scheme</b>							
- Staff Salaries	33,640.00	12,874.43	20,765.57	11,120.00	35,916.57	HC operating	effective curative/prev. services provided. Improved morbidity and mortality
- Supplies (drugs and other commodities)	40,500.00	1,950.25	38,549.75	13,500.00	50,049.75	same as above	same as above
- Transport for Mobile Clinics	7,500.00	6,085.49	1,414.51	2,500.00	3,914.51	provide preventive and curative services to pop. not covered now	Improved health status
- Other Running Costs	4,875.00	1,571.17	3,303.83	1,625.00	4,928.83	HC operating	same as above
- Refresher Courses for HC Staff	14,200.00	3,419.54	10,780.46	8,120.00	18,900.46	improved quality of services at HC	improved health status
Sub-Total	100,715.00	26,169.88	74,545.12	40,865.00	115,410.12		
<b>2. Direct Inputs for Learning Resources</b>							
- Prod. and Dist. of Manuals	45,190.00	49,137.29	(3,947.29)	25,820.00	21,872.71	provide appropriate learning material in areas not covered before	improved knowledge of health workers and better health services
- Translations	6,030.00	-	6,030.00	3,450.00	9,480.00	same as above	same as above
- Defender	11,970.00	14,420.11	(2,450.11)	6,840.00	4,009.89	providing health information to the general public	improved health practices
- Afya	11,500.00	21,729.31	(10,229.31)	6,575.00	(3,654.31)	provide health information to paraprofessionals	improved health service in practice
- Refresher Courses (see under 1. Kibwezi)	-	-	-	-	-	-	-
Sub-Total	74,690.00	85,286.71	(10,596.71)	42,685.00	32,088.79		
<b>3. Indirect Inputs</b>							
- Salaries and Fringe Benefits	178,875.00	194,268.10	(15,393.10)	105,020.00	93,126.90	improved project management	improved learning from documented AMREF activities
- Overseas Training	24,000.00	32,052.33	8,052.33	-	(8,052.33)	improved capability of jr. staff to take on more responsibility for project planning and evaluation	contribution to improved manpower resources to Kenya
- Office Equipment	15,365.00	30,093.18	(14,728.18)	-	(14,728.18)	improved project management	
- Allowances for field studies and evaluation	41,535.00	25,742.18	15,792.82	26,050.00	42,142.82	completed studies and documentation of AMREF project experiences	improved learning and information systems
- Dissemination of information	13,650.00	4,430.63	9,219.37	7,800.00	17,019.37	same as above	same as above
- New York Office support	95,175.00	95,175.00	-	50,100.00	50,100.00	fundraising and backstopping	
Sub-Total	368,990.00	481,767.42	(112,777.42)	189,470.00	175,326.58		
Grand Total	544,305.00	497,796.21	46,508.79	273,020.00	770,726.75		

Average monthly health centre expenditure for the period June-September, 1981 has amounted to \$ 7,000 @ KShs. 10/- to US \$ 1.

#### Implementation Status

At present, 19 of 20 Health Centre staff have been deployed at Kibwezi; the mobile outreach programme is operational and covers 6 widely dispersed service points. The health centre serves over 3,000 outpatients per month on average and some 40 inpatients. 80 Community Health Workers have been trained.

Additional details are available in Project Year 2 Annual Report, July 1981.

#### Other Comments

A total of 6 one-day Seminars have been held with rural health staff in Kibwezi Division. AMREF's surgical team also made a one-day visit to Makindu Hospital and gave instruction on simple surgical techniques, especially regarding emergency cases. A dental surgeon has made a few visits to Makindu Hospital for inservice training sessions.

Additional information is again available in Project Year 2 Annual Report

#### Recommendations for Use of Remaining Funds

Assuming that AMREF gets another source funding for Kibwezi Health Centre running costs by October 1982, there will be a saving of \$ 31,000 on this component for re-allocation. Otherwise, the total balance will have to support the Health Centre as programmed (see page 17). A re-allocation includes an amount for special studies in relation to Kibwezi Rural Health Scheme.

#### Requiring Additional Funds

AMREF plans to introduce some new activities in Kibwezi Division during the remaining part of the project period:

- A programme for preventing malnutrition and reducing the prevalence of chronic under-nutrition among high-risk groups.
- Improving water supply and environmental sanitation at village level.
- Training of Traditional Birth Attendants (TBAs) on a pilot basis.
- Identifying and distributing appropriate materials for continuing self-education among dispensary and Health Centre staff in the area.
- Studying self-care at village level.
- Increase evaluation activities in relation to Kibwezi Rural Health Scheme.

AMREF expects several of these activities to be funded from other sources but recommends that costs for a more ambitious evaluation programme be financed through additional funding from USAID.

3.2 Direct Inputs Learning Resources

Under this component, the following inputs were provided:

- production and distribution of manuals
- translation of manuals
- production and distribution of AFYA
- production and distribution of DEFENDER

Expenditures

	<u>Total Budget for Project Years 1 &amp; 2</u>	<u>Actual Exp. for Project Years 1 &amp; 2</u>	<u>Cumulative Balance for Project Years 1 &amp; 2</u>
Manuals	\$ 45,190	49,137.29	( 3,947.29)
Swahili translation 1 per annum	6,030	-	6,030.00
DEFENDER	11,970	14,420.11	( 2,450.11)
AFYA	11,500	21,729.30	(10,229.30)
TOTAL:	\$ 74,690	85,286.70	(10,596.70)

Manuals identified for Project Year 1 were:

1. Epidemiology
2. Therapeutic Guidelines
3. Community Health
4. Surgery

Identified for Project Year 2 were:

1. Gynaecology & Obstetrics
2. Medicine Manual
3. Rural Health Practice Manual - Kenya
4. Child Health Manual - Swahili version

The Sudan Primary Health Care Manual is now replaced by Medicine Manual.

To date, the following manuals have already been printed and distributed:

1. Epidemiology
2. Therapeutic Guidelines
3. Community Health

### Development and Evaluation of Manuals

All the remaining manuals are expected to be ready and distributed during 1982.

An evaluation of Child Health Manual focusing on readability has already been carried out.

Evaluation of manuals was a new field for AMREF and met with some difficulties. However, AMREF has gained more experience being involved in developing other manuals, e.g. a manual for the Ministry of Health on the Expanded Programme of Immunization. AMREF is now ready for a major evaluation of Rural Health Series manuals in 1982.

Evaluation findings of the Child Health Manual are presently applied in editing Surgery and Rural Health.

### Translation of Manuals

MOH selects the manuals to be translated but one problem is the difficulty in identifying a good Swahili translator.

### "Afya" Health Magazine

"Afya" is edited by AMREF's Medical Director and is subscribed to mostly by middle-level medical staff, i.e. clinical officers, medical assistants, nurses, etc. The circulation is primarily within Kenya, Tanzania, and Uganda, but there are also subscribers from countries outside East Africa. A subscription fee of KShs. 20/- a year is charged for 4 issues a year. However, Ugandan subscribers are currently receiving the issues free of charge since it has been difficult to collect subscriptions in that country.

The selection of articles for "Afya" is mainly from articles in other health journals and articles written by AMREF staff, the target being middle-level rural health staff. The Editor spends a limited amount of time on the magazine as it is meant to be a low-cost magazine.

Starting in 1981 the number of issues was reduced from 6 to 4 per year, while increasing the size of each issue to the same total number of pages per year.

### "Defender" Health Education Magazine

"Defender" is distributed mostly in Kenya, Uganda, and Tanzania. Circulation is currently 9,000, increasing by about 1,000 copies per year.

There is a higher response to the magazine from Uganda than in Kenya or Tanzania; reasons for this are currently not well known. The magazine is edited by the head of AMREF's Health Behaviour and Education Department. Selection of topics for publication in "Defender" is made on the basis of number of readers raising a particular problem. The editor prepares responses which are published with a typical inquiry.

Other Comments

Manuals: The grant supports cost of the manuals incurred by AMREF's Printing Department which means the steps from typesetting to actual printing. There are various indirect factors that may cause delays in production of the manuals:

1. The editing from final draft to typesetting has proved to be more time consuming than anticipated.
2. Printing Department has limited capacity and must cope with other manuals funded separately and also with reprints of manuals developed earlier.

The volume of manual reprints is currently 30,000 a year. Next year the addition of another 4 manuals will bring this number to 40,000. This volume is beyond the capacity of Printing Department as at present.

Recommendations for Use of Remaining Funds

Funds for these components are over expended as end of Project Year 2. The total balance is to be re-allocated to cover the default and to support Afya-Defender. Some of the re-allocated funds will be used to distribute sets of learning materials to a number of Health Centres and dispensaries currently not on the mailing list.

Requiring Additional Funds

Additional funds are needed if a target of 12 manuals is to be met over a three-year period.

DANIDA funding of some manual costs is coming to an end in 1982. AMREF's Training Department could then be sub-divided into three separate activities:

1. Continuing Education activities for rural health workers
2. developing learning resources such as manuals, periodicals, etc.
3. distributing appropriate learning resources to target groups in the field.

AMREF is currently seeking funds for these activities, and 3. and possibly 2. may be appropriate components of an extended project.

3.3' Indirect Inputs

3.3.1 Salaries

Expenditure

The grant is supporting salaries of 4 senior AMREF staff, 2 junior staff and two secretaries. The grant was also to support salary of a Deputy Medical Director. Costs as at the end of FY2 were as follows:

	<u>Total Budget for Project Years 1 &amp; 2</u>	<u>Total Actual for Project Years 1 &amp; 2</u>	<u>Cumulative Balance for Project Years 1 &amp; 2</u>
<u>Salaries</u>			
Senior staff (4)	\$ 103,950	114,602.90	(10,652.90)
Junior staff (5)	48,670	52,912.97	( 4,242.97)
<u>Allowances</u>			
Senior staff (4)	18,595	16,257.54	( 662.54)
Junior staff (5)	6,160	6,189.34	( 29.34)
Passages	4,500	4,305.35	194.65
TOTAL:	\$ 178,875	194,268.10	(15,393.10)

Implementation Status

These four senior staff are directly involved in the management and supervisory activities and are actively engaged in committees established for the project (reference is again made to project year 2 Annual Report). 11

One of the four senior staff, Medical Director, is also project leader for Kibwezi Rural Health Scheme with full responsibility for project implementation.

Among the junior staff, the Accountant and Projects Officer have provided support to senior staff on management and supervisory activities. The projects Officer was away for one year for an MPH and is now back and has started taking more responsibilities for project planning and monitoring.

Other Comments

The position of Deputy Medical Director has been vacant and funds for this post were initially used for the position of Administrator and are now partly supporting the position of Evaluation Officer.

Recommendations for Use of Remaining Funds

Funds on this component will be fully expended as at the end of Project Year 3.

Requiring Additional Funds

The position of Deputy Medical Director should be filled. Since funds for this position are now used for a portion of Evaluation Officer's salary, further funds will be required.

It is recommended that the evaluation activities be strengthened. Therefore, an extension of the grant should cover full salary and support costs for the Evaluation Officer; the salary of a Deputy Medical Director should remain a part of an extended project and be used for the intended purpose. Since there is an increasing amount of evaluation activities, salary for a junior evaluation officer should also be covered.

3.3.2 Overseas Training

Expenditure

	<u>Total Budget for Project Years 1 &amp; 2</u>	<u>Actual Exp. for Project Year 1 &amp; 2</u>	<u>Cumulative Balance for Project Years 1 &amp; 2</u>
Overseas training	\$ 24,000	32,052.33	(8,052.33)

Over-expenditure on this component is partly due to the fact that one of the trainees is taking a two-year programme whereas the budget had allowance for one-year programme.

Implementation Status

Two AMREF staff have been supported for MPH degrees in the USA. One of them is back after a successful MPH programme while the other is expected to return in mid 1982.

Other Comments

Training programme for local staff is a valuable contribution to the development of Kenya's health manpower resources. A continuation of this programme is, therefore, recommended.

Recommendations for Use of Remaining Funds

As stated above under expenditure, this grant component is already over-committed. Re-allocation includes some funds to cover this component (see page 17).

3.3.3 Office Equipment

Expenditure

An IBM Composer, typewriters, filing cabinets and a calculator were part of the office equipment purchased on grant funds as follows:

	<u>Total Budget 2-year Period</u>	<u>Total Actual 2-year Period</u>	<u>Cumulative Balance 2-year Period</u>
IBM Composer	\$ 12,500	26,153.97	(13,653.97)
Typewriters	1,920	3,381.14	( 1,461.14)
Filing Cabinets	320	612.49	( 292.49)
Calculator	625	545.58	79.42
TOTAL:	\$ 15,365	30,693.18	(15,328.18)

Implementation Status

The equipment mentioned above has been put to full use for project implementation.

Recommendations Requiring Additional Funds

As mentioned above under learning resources, the purchase of a word processor would considerably facilitate the editing of manuals and periodicals. A re-allocation also includes an amount for some office equipment.

3.3.4 Field Studies, Evaluation and Dissemination of Information

Expenditure Financial inputs as at the end of PY2:

	Total Budgeted 2-year Period	Total Actual 2-year Period	Cumulative Balance 2-year Period
Per diems	\$ 31,585.00	2,000.00	29,585.00
Flying costs	5,250.00	5,883.79	(633.79)
Evaluation studies	5,000.00	17,858.39	(12,858.39)
TOTAL:	\$ 418.35	25,742.18	16,092.83

Implementation Status

A complete evaluation of the Medical Radio Communications Network was carried out in 1980 and a conference presenting findings took place in December. A complete report as well as conference proceedings are available on request.

Currently, an evaluation of the Flying Doctor Services is underway and a conference on Medicine by Air is planned for mid 1982 to discuss the findings.

A socio-anthropological study on health attitudes and beliefs was carried out in the Kibwezi area, focusing on birth attendants. The findings of this survey, carried out by an external consultant are now available in a final report.

Recommendations for Use of Remaining Funds

It is recommended that the balance be spent on additional special studies in relation to Kibwezi Rural Health Scheme and on evaluation activities within AMREF's overall programme (see page 7).

Requiring Additional Funds

Funds are required for AMREF and consultant staff time and expenditure for special studies in relation to AMREF projects during the next few years. Such studies will be a basis for project review and reformulation, and for the development and design of new projects. The need for such studies becomes obvious as implementation of existing projects proceeds and cannot usually be predicted at the start of a project. Needs for such studies are foreseen in the areas of ground mobile medicine, training of traditional birth attendants, self-care at household and village level, use of existing learning material, nutrition. Other needs are likely to emerge.

3.3.5 Other Support cost for New York Office

AMREF USA is the project holder and maintains the master financial accounts for the project and carries out the following project functions and activities:

- liaison with AMREF Nairobi regarding project planning and evaluation
- liaison with USAID Washington regarding project progress and financial status and reporting
- staff recruitment as required
- organising and co-ordinating the US-based training activities
- information services regarding project progress and evaluation findings and results
- project planning, management and evaluation inputs during regular field visits to Kenya

Support costs for New York is committed and will be expended as programmed.

4. SUMMARY OF ISSUES IN PLANNING AND MANAGEMENT

4.1 Project Management

Each of AMREF's projects is headed by a project leader in charge of project implementation. In addition, some projects have a project co-ordinator who usually works directly at the project site and is responsible for supervising day-to-day operations. The project co-ordinator reports to the project leader, and his role and the extent of his responsibilities vary greatly with the size and complexity of the project. Overall project supervision and support are provided by the project management division, the financial/services division and the office of the Medical Director. At present, senior HQ staff, particularly division directors, are overloaded with direct project implementation responsibility as project leaders. Additional staff at senior and middle levels are needed to serve as project leaders and to strengthen project monitoring. An increase in staff at this level would free up directors and department heads to deal more effectively with overall programme development, co-ordination of departmental inputs into various projects, development of improved management and information systems, and for more in-depth evaluation and consultancy.

In-departmental co-ordination needs to be strengthened. At present, departments tend to operate in isolation without the continuous dialogue necessary to identify areas for collaboration and to permit learning from one another.

Retrieval of financial information for project planning and evaluation is difficult under the present accounting system. Although the system is adequate for showing funds received and actual expenditures, it does not permit easy retrieval of cost per activity or per specific unit of output, such as a particular training manual, or the basic training of a CHW. This information is important for assessing the cost effectiveness of project activities, and for decision-making about future allocation of resources to least cost alternatives between interventions and services of comparable effectiveness. The financial information system needs to be structured so that rapid retrieval of this type of information will be possible.

4.2 Documentation of Findings from Project Activities

AMREF has worked extensively in rural health in some of the most difficult and neglected areas in East Africa. However, data have not been systematically collected for all projects, and some valuable experiences have not been adequately documented. More analysis of project information and additional data collection are needed, not only to improve planning and to identify areas requiring change, but also to demonstrate to others the lessons learned and the replicability potential of AMREF projects.

4.3 Co-ordination with the Ministry of Health

In Kenya, a number of formal links have been designed to assure that MOH is not only informed but can actively participate in the decision-making about AMREF's programme. Specifically, the following means have been used to co-ordinate with MOH:

- MOH is requested to approve all AMREF rural health proposals and programmes
- MOH is represented on the steering and advisory committees of relevant AMREF projects
- for those projects without formal steering committees, MOH is invited to participate in planning and review meetings
- there are numerous individual consultations between AMREF and MOH staff, constituting an informal network of communication
- in some projects, e.g. Kibwezi Rural Health Scheme, MOH staff have been seconded to AMREF, working hand in hand with AMREF staff

Although the formal means for co-ordinating and sharing information exist, they have not been fully utilized by MOH; participation of ministry officials in steering and advisory committees and response to AMREF project progress reports have been poor. No doubt this is partly due to chronic work overload at MOH. Contacts at the district level will need to be improved to assure not only that the district medical officer is informed of AMREF's activities in his area, but also to encourage more active participation of district health teams. Strong links already exist between these teams and the Training Department in some areas, but these will need to be extended to other AMREF activities.

5. SUMMARY OF RECOMMENDATIONS

- 5.1 Responsibility for project implementation should to a larger extent be delegated to middle level staff, and project leaders should be appointed among a slightly larger group of senior staff.
- 5.2 Senior staff should spend less time on day-to-day administration of projects and more time on project and programme evaluation, review, and development.

- 5.3 Project management section and Medical Director's office should liaise closely with Finance to develop a better system for monitoring project implementation. With the return of Projects Officer from study leave and addition of a Projects Co-ordinator, together with a Project Administrative Officer, project reporting is expected to improve.
- 5.4 AMREF should improve its project cost accounting system to link expenditure to project activities. AMREF should consider identifying a full-time project accountant for this task.
- 5.5 Inter-departmental co-operation and co-ordination should be further developed, particularly in areas where different departments have overlapping interests.
- 5.6 MOH headquarters staff are over-burdened and usually unavailable for steering committee meetings. Their current degree of participation in AMREF activities is probably fair considering these constraints. However, AMREF should try to develop better liaison and co-ordination with the Government at district level. This co-ordination would be easier if the DMO were briefed accordingly by MOH headquarters on the areas of co-ordination.
- 5.7 AMREF project experiences should be more systematically and fully analysed and documented. Reports should be distributed to government and NGOs who are likely to benefit from the information, and more seminars and workshops to disseminate information should be held.

6. PLAN OF ACTION FOR BALANCE

Table 4 shows planned expenditure for project year 3 and a re-allocation of the balance

Table 4 Planned Expenditure Re-allocation:

	Total Budget year 1-3	Expenditure Project year 1&2	Balance at Sept 81	Planned expenditure project year 3	Surplus balanced by deficits ( ) in relation to project budget
Direct inputs - Kibwezi (see Table 3 for details)	141,580	26,169.88	115,410.12	84,000	31,410.12
Direct inputs - Learning Resources (see Table 3 for details)	117,375	85,286.71	32,088.29	38,000	(5,911.71)
Indirect inputs					
- Salaries & Fringe Benefits	284,395	194,268.10	90,126.90	90,126.90	-
- Overseas training	24,000	32,052.33	(8,052.33)	15,000	(23,052.33)
- Office equip.	15,365	30,693.18	(15,328.18)	14,302.09	(29,630.27)
- Field Studies & Evaluation	67,885	25,742.18	42,142.82	22,000.00	20,142.82
- Dissemination of Information	21,450	4,408.63	17,041.37	10,000.00	7,041.37
- New York Office support	145,275	95,175	50,100	50,100	-
Sub-total	558,370	382,339.42	176,030.58	201,528.99	(25,498.41)
TOTAL	817,325	493,796.01	323,528.99	323,528.99	0

7. Extension with additional funds

AMREF intends to allocate more staff time to evaluation of ongoing projects and programmes, to more extensive project reviews and reformulations, and to developing new projects and project components on the basis of such evaluations and reviews.

A first step will be more systematic and detailed monitoring of existing projects, which will have to be developed by senior staff in cooperation with project leaders on different levels. A more extensive programme of evaluations has to be planned and implemented, and alongside this work AMREF will carry out a number of special studies into issues related to but not incorporated in the ongoing Kenya projects. These are natural tasks of an innovative organisation, but more senior staff time and support costs need to be allocated to them if the built-in potential of AMREF's increasing number of projects is to be properly utilised for the benefit not only of AMREF itself but also other government and non-government institutions.

AMREF intends to work out a plan for this work and to submit, before the end of this grant, a request to USAID for financing of Kenya-related activities of this kind.

SCOPE OF WORK FOR MID-TERM EVALUATION OF USAID  
OPERATIONAL GRANT AID/Hr-G-1560

Goals

- Clarify objectives of the grant
- Assess planned versus actual activities and accomplishments/  
results by individual grant component
- Assess structures and processes developed for effective support  
and evaluation of projects
- Review appropriateness of objectives in light of project  
experience so far and document what modifications in the grant  
might be indicated

Participants

- Dr Katarina Janovsky, Evaluation Officer, AMREF
- Mr Victor Masbahi, Projects Officer, AMREF
- Dr Mike Gerber, IMRF, New York (workshop only)
- Dr Jack Slattery, Health, Nutrition and Population Office,  
USAID, Nairobi
- Dr James Kagia, Chairman, Department of Community Health,  
University of Nairobi (Consultant)
- Dr Rita Morris, Mazingira Consultants

Contributions will also be forthcoming from several AMREF senior staff, including Mr Douglas Lackey, Projects Director and Dr Erik Nordberg, Medical Director.

Statement of Work

General

- Overall review of present grant objectives to clarify and  
operationalize expected results
- Assess adherence to project schedule and provide analysis of  
constraints leading to delays
- Assess rate of use of financial inputs (actual and potential  
problem areas with regard to over-and-under-spending)
- Assess and document how technical and managerial inputs have  
been used
- Assess present procedures for cooperation/coordination between  
AMREF and GOK/MOH
- Determine and document specific project activities and ensuing  
results/outputs with special emphasis on Kibwezi Rural Health  
Scheme (see below) and learning materials (assess usefulness and  
whether target groups are reached)

- Propose possible modifications of grant in terms of financial inputs and activities on the basis of evaluation findings
- Develop an improved framework for relating project inputs to activities and actual or expected results which can provide the basis for a more extensive end-of-project evaluation (in accordance with PES)
- Discussion of findings and implications of findings for the last project year as well as for future funding of activities at a one-day workshop in Nairobi. The workshop can serve as a forum for a broad-based technical review of the project activities.

Kibwezi Rural Health Scheme - Overall assessment of lessons learned at Kibwezi so far, particularly aspects pertaining to replicability in other marginal areas of Kenya, through field visits to Kibwezi and interviews with key staff in Machakos and Nairobi. Specific areas to be explored through primary and/or secondary sources, may include:

community sensitization;  
 community health worker selection;  
 community health worker training;  
 support and supervision of community health workers by project and health centre staff;  
 retraining of existing health staff in the division;  
 remuneration;  
 family planning;  
 TBAs;  
 health centre cost and financing;  
 reporting and monitoring of community health worker activities and performance;  
 evaluation/information system for assessing impact.

Proposed Time Frame	1)	Submit scope of work and documentation to USAID	15 Oct
	2)	Meeting of all participants including consultants	21 Oct
	3)	Field Work including interviews at AMREF HQ by AID and external consultants	Week of 26 Oct
	4)	Individual contributions received by AMREF Evaluation Officer	11 Nov
	5)	Final draft report completed and distributed	16 Nov
	6)	Workshop to discuss findings	20 Nov
	7)	Final report submitted	4 Dec

LIST OF REFERENCE MATERIALS

1. USAID Operational Program Grant Proposal - 1 copy per participant
2. USAID Operational Program Grant Document - 1 copy per participant
3. Project Progress Report No. 1 August 1979 - December 1979 - 1 copy per participant
4. Project Year 1 Annual Report August 1979 - 31 July 1980 - copy at AMREF for reference
5. Project Year 2 Annual Report August 1980 - July 1981 - copy at AMREF for reference
6. Report of an investigation into the manual "Child Health" with health workers in Kenya and Tanzania - copy available at AMREF for reference
7. Report on a survey conducted in Kibwezi related to nutrition, health care and family planning - March - April 1981 - copy available at AMREF for reference
8. Draft model for District Continuing Education Programme - copy available at AMREF for reference
9. Financial Reports
  - July - September 1979 )
  - January - March 1980 )
  - April - June 1980 )
  - July - September 1980 )
  - October - Dec 1980 )
  - July 79 - June 1982 )

1 copy per participant

NOVEMBER 3, 1981

Dr. Katja Janovsky  
Evaluation Officer  
African Medical and Research Foundation  
P.O. Box 30125  
Nairobi, Kenya

Dear Katja:

This is in response to your memo dated October 15, 1981 to Jack Slattery which was forwarding the revised Scope of Work for OPG Evaluation and issues on consultants for the evaluation.

Numerous meetings and discussions have since taken place and resolved issues on both the revised Scope of Work and accepted Dr. James Kagia and Dr. Rita Morris as the external consultants. We would like to concur in writing for the record the use of the revised Scope of Work we discussed at the meeting on Monday October 26, 1981 as the final fashion of the Scope of Work for the evaluation of USAID OPG and for AMREF to engage Dr. Kagia and Dr. Morris as the external consultants for USAID OPG.

With best wishes.

Sincerely yours,

  
Nellie Mwanza  
Program Operations Assistant  
Health/Nutrition/Population Division

C.C. Mr. Victor Masbayi  
Projects Officer  
AMREF  
P.O. Box 30125  
Nairobi, Kenya

USAID Operational Grant to AMREF (AID/Afr - G - 1560)

Mid-Term Evaluation Report

By  
Rita MORRIS  
Mazingira Institute  
Nairobi

9 November 1981

## TABLE OF CONTENTS

		Page
Section 1	Scope of Work	1
Section 2	Introduction - The Evaluation Process Acknowledgement	1
Section 3	Summary of Recommendations	2
Section 4	Project Background Project purpose Project inputs Project outputs	
Section 5	Project Implementation Construction Preparation, production and distribution of training manuals Printing capacity Distribution Afya Defender Kibwezi Rural Health Scheme Training Refresher courses Training of CHWs	5
Section 6	AMREF's Capability to Plan, Manage and Evaluate Financial support Personnel Other AMREF rural health services	14
	Conclusion	18
	References	19
	Annex 1	20
	Annex 2	21

MID-TERM EVALUATION OF USAID OPERATIONAL GRANT  
(AID/Afr - G - 1560) (AMREF Project Ad 1)

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1. SCOPE OF WORK

1.1 Agreed scope of work

The following scope of work was approved by the Foundation:

- a. Evaluation of the overall capability of AMREF to plan, manage and evaluate its rural health care services and training programs in Kenya.

The following tasks were identified to accomplish the above objective:

- i) review documents, design evaluation methodology, select indicators and prepare evaluation tools;
- ii) assess provision of inputs and production of outputs as set forth in framework (to be developed by AMREF staff) and in implementation schedule and budget of grant agreement;
- iii) examine the organizational structure and administrative processes adopted for project implementation and evaluation;
- iv) coordinate, with Dr. Kagia (second consultant evaluating Kibwezi Health Scheme) review and discuss findings on Kibwezi Health Scheme for overall evaluation of the project;
- v) submit written report of findings and implications of findings for the last project year, as well as for future funding of activities;
- vi) participate in discussions at the one day workshop in Nairobi.

2. INTRODUCTION

2.1 The evaluation process

The time period of eight days consultancy was a severe constraint in the performance of this evaluation. The task was complex as AMREF activities are sponsored by many donors, some with overlapping inputs and targets.

The evaluation methodology was confined to informal interviews of headquarters staff, an MCH official, and analysis of secondary sources of data. Pertinent documents were identified, reviewed and analyzed. Financial records were examined, and discussions with the accountants and project staff conducted.

## 2.2 Acknowledgement

This task would have been impossible without the cooperation and help of the AMREF staff. I acknowledge this with sincere gratitude and appreciation, and thank everyone who helped to make this task a success.

## 3. SUMMARY OF RECOMMENDATIONS

### 3.1 Production and distribution of manuals

- a. Annual quantitative targets are irrelevant. Attention to quality and thematic coverage for the different levels of health workers should be aimed at.
- b. Translations into Swahili should be given priority, with attempts to speed up the process.
- c. Manuals need simplification for readability, clarity and usability. All future publications should be edited with the above factors in mind. An additional full time editor with experience in linguistics and English as a second language, should be recruited for the job.
- d. Dispensaries should be included in the distribution lists. A system of small libraries accessible to all staff at rural health facilities should be developed in collaboration with MOH.

### 3.2 Training

- a. Community health workers
 

Comparative research testing the variables should be conducted in subsequent training sessions. Such research would lead to identifying an appropriate model or models for future training programs.

The general lack of learning materials for CHWs is most urgent. Careful review and development of resources is a priority.

A scheme for community support of CHWs should be developed in collaboration with MOH.
- b. Refresher courses
 

A systematic program for refresher courses, should be developed. Curricula for such programs need to be designed after identification of weak areas in staff performance.

### 3.3 Management

A field project coordinator with full responsibility for the Kibwezi Rural Health Scheme is essential. Reorganisation in this area is recommended after careful review of the situation.

The supervision of existing dispensaries and their use as operational bases for CHWs and mobile programs should be considered, for the efficient organisation of the scheme.

The functions of all cadres of health workers should be reviewed in light of current experience. Additional resources needed should be identified and changes made where necessary.

Systems for cost benefit analysis of the Kibwezi project need to be designed and implemented.

The system for monitoring and evaluation currently under development should be completed in the next six months.

The position of Deputy Medical Director should be filled, and requests made for the creation of a new position of Evaluation Officer to be supported by the Grant. Whether this could be undertaken with current funds needs to be reviewed.

Staff welfare in respect to salaries and benefits should be reviewed and recommendations made to the donor agency.

The Kibwezi Rural Health Scheme should be extended for a period of one year for effective implementation.

More efforts should be made for closer collaboration and involvement of MOH staff in the crucial aspects of policy development for the project.

The final evaluation should be conducted close to the completion of the Kibwezi Health Scheme. The time frame allowed for outside evaluators should be more realistic.

## 4. PROJECT BACKGROUND

USAID Project No. 615 - 0179 was initiated in August 1979 with the overall purpose of strengthening the capability of the International/African Medical and Research Foundation (I/AMREF) to plan, manage and evaluate its rural health care services and training programs in Kenya.

The project purposes were defined as follows:

4.1 Assistance to Government of Kenya, Ministry of Health (GOK/MOH) in the development of an integrated and comprehensive rural health service system for the Makindu Division of Kenya, with Kibwezi Health Centre (HC) serving as the base of operations, utilizing HC staff as well as Community Health Workers (CHWs) at the village level to meet the health care needs of the population in the target areas.

4.2 Assistance to GOK/MOH in the expansion, development and production of teaching materials and learning resources for all its rural health workers, and in the development and execution of training and refresher courses for MOH personnel especially those involved with the Kibwezi Project.

4.3 Determination, through evaluation and cost-benefit studies, of the value of AMREF's rural health care services and training programs for replication particularly in arid/semi-arid areas.

a. Project inputs are summarized as follows:

Salaries (60 per cent) for four senior AMREF staff for overseeing the health care delivery, health education and training components as well as the total planning, programming, evaluation and financial management of the project.

Salaries (60 per cent) for three host country nationals, plus 2 secretaries, to assist the senior staff and be responsible for the day to day liaison with the project field staff.

Salaries for 17 Kibwezi Health Centre staff.

Supplies and selected running costs for Kibwezi Health Centre.

Office equipment for AMREF headquarters.

Training and learning resources including overseas training of 2 junior headquarters staff, inservice and refresher training courses for Kibwezi HC staff; the production and distribution of training manuals, health journals and magazines.

Miscellaneous allowances for field studies and evaluations.

b. Project outputs can be grouped into three major areas:

i) Kibwezi Rural Health Scheme, created as a model for rural health care systems with special emphasis on community participation, training of CHWs and maximum health service coverage within the resources available for the area;

- ii) production and distribution of training manuals, AFYA health journal, and DEFENDER health education magazine for rural health workers;
- iii) management, supervision and evaluation of key AMREF rural health services and training programs for development as replicable rural health delivery systems.

## 5. PROJECT IMPLEMENTATION

5.1 The status of implementation steps as of 31st July 1981 is reported in detail in Annex 2 of the Annual Report Project Year 2, for the Kibwezi Rural Health Scheme and other AMREF Training and Rural Health Programmes<sup>1</sup>. Hence, in this report only additional comments and observations are made where appropriate.

In general, the progress on the implementation schedule has been on target, yielding satisfactory results. Weaknesses were identified and steps are being taken to strengthen these areas.

5.2 Construction of the Kibwezi Health Centre was delayed by a period of 8 months. Many of the staff, felt this delay was good. It gave more time for study of the community. Many of the findings of baseline surveys were incorporated in the planning for the project.

In project planning, the time factor allowed for such exercises need to be reviewed, in light of this experience. The underestimation of time required could lead to serious problems, particularly in the areas of community acceptance and involvement in the project.

### 5.3 Preparation, production and distribution of training manuals

The project targeted four manuals yearly. In the two project years six new manuals were published. A list of all manuals published, with data on demand for 1980 and 1981 is given in Table 2, Annex 1.

The manual on Sudan Primary Health Centre is ready for publication. Rural Health Practice was completed in draft form with a 1000 copies printed in 1979. However, more copies were not published as a decision was made to rewrite it, incorporating some of the findings of the investigation on the Child Health Manual<sup>2</sup>. Health Centre Surgery, a manual also completed in draft is set aside for rewriting.

The Educational Officer/Editor is personally undertaking this Herculean task with the following objectives:

- a. Simplifying the language for clarity and readability.
- b. Improving the layout and presentation.
- c. Changing the indexing system to facilitate easy referencing.

The process involved is very complex and progress is very slow as it conflicts with the many other responsibilities of the educational officer. However, this task is justifiable as evident from the testing results: simplified and unsimplified versions of the text were given to the same group of student community nurses at a one year interval. Reading scores on the unsimplified versions ranged from 33 to 81 per cent, whereas scores on the simplified versions ranged between 56 to 92 per cent, significant at the 0.01 level.

It should be pointed out that the editor made many attempts to teach authors, the methods of writing simple English, but so far his attempts have been futile. In his view, the task requires a background in linguistics with specialization in English as a second language.

First drafts of the manuals, Gynaecology and Obstetrics as well as Medicine have been completed. In the rural health series, manuals on Skin Diseases and Practical Radiology are in the beginning stages.

Besides the rural health series, two very much needed manuals, one on Continuing Education and the second on Manuals are in draft stages.

The setting of numerical targets needs serious review. Both in terms of cost and preparatory time there are variations. The manual Community Health took a period of 8 years. Manual size, testing sessions required, and reviews and editing needed all vary.

In 1981, the typesetting, plate making and printing costs for the manual Community Health (1000 copies) totalled KShs. 78,700. In 1979 similar costs for the Epidemiology manual totalled KShs. 65,095. Preparation costs (pre-1978) for the Epidemiology manual including author's fees, printing of draft copies and support for preparation totalled KShs. 105,590. Editorial and secretarial costs totalled KShs. 75,551. The total cost for producing the Epidemiology manual was KShs. 246,236.

Manual production costs are shared by a DANIDA Grant, which runs through 1983.

This rural health series aims at serving tutors in rural health training centres, clinical officers, and community health nurses. Auxiliary cadres also use these manuals for the lack of suitable materials. However, no suitable learning resources have been developed for grass-root level health workers (CHWs).

Translations into Swahili would assist auxiliary health workers. The Swahili translation of 'Where There Is No Doctor' is widely used and in great demand. AMREF's public health tutor is of the opinion that the Rural Health Series, is considered a valuable resource despite its reading difficulty level, and would serve the auxiliary cadre if translated.

Swahili translations have not met the targeted one a year, due to several problems. MOH was requested to select the manual, has chosen the manual Sudan Primary Health Care, which is currently in production. Skilled translators are a scarce resource. Currently, the manual Child Health is being translated. A Tanzanian author decided to translate this manual and got the permission to do so. AMREF decided to hire him, and the first part of Child Health has been completed and will soon be in production as Volume 1.

There is a great lack of learning resources for the Community Health Worker. This whole field is still in the experimental stages, and as such there are no tested curricula or recommended learning materials. As this cadre of worker will be a great resource in the provision of rural primary health care, the whole question of developing learning materials, curricula, and training programs need considerable research and development. This task is currently handled by several of AMREF's departments. Polarized views and unresolved issues need to be ironed out.

The development of learning resources cannot be done in isolation. Careful research and resolution as to what should be the functions and role of CHWs is the first step in the process. Curricula would then be based and developed on the levels of expected performance, following which materials would be identified or produced.

#### 5.4 Printing capacity

The in-house printing capacity to cover all AMREF's publications is very limited. Assessment of the cost effectiveness of commercial printing facilities was carried out. The costs were found to be comparable. The use of outside facilities currently covers the printing needs. Orders are placed well in advance and there are no delays.

#### 5.5 Distribution

AMREF recognised its own weakness in the book distribution system with the increase in demand for both books and the journal AFYA and the magazine DEFENDER. A separate management unit, with a full time manager is in operation as of this month.

The printing and demand figures for the manuals are given in Table 1, Annex 1. The demand for the manuals has more than doubled in a year for five publications.

The distribution of manuals does not cover dispensaries. This is an area where the need is most urgent, particularly in remote areas.

The health centres are on the distribution lists. However, discussion with Dr. Maneno of MOH who is in charge of rural health services, revealed that in many of the health centres these manuals are not available. Distribution alone will not help. Manuals should be physically located in the health centre, as well as readily accessible to all staff members. As this is an identified problem area of much concern to MOH, AMREF and MOH need to work out a suitable system of small libraries, both accessible and available to all staff members. Measures to provide publications for dispensaries also need to be considered.

The observations of AMREF's public health tutor involved in continuing education courses, also confirm the great need for books. All levels of health workers working at rural health centres and dispensaries have no access to books.

It should also be pointed out that even if individuals wish to purchase books, distribution points do not exist in the rural areas. The purchase of the manuals, even at cost is unaffordable by the majority of health workers.

The MOH, so far have not adopted any of the manuals to cover the curricula for the training programs of health workers. Students can only afford to buy officially recognized textbooks. In this context, the MOH staff responsible for curriculum development and revision should be kept up-to-date on the AMREF publications.

#### 5.6 AFYA

The circulation of AFYA has increased by a third to 6000 per issue. The journal has improved in quality with the cut down of issues from 6 to 4 issues in 1981, and the increase in pages from 32 to 44. Advertisements have been cancelled, and the increase in the subscription rate from KShs. 10 to 20 covers the loss of income from advertisements.

#### 5.7 DEFENDER

The readership increased with current distribution totalling 10,000. New readership in 1981 averaged 240 per month. The format of the magazine was changed, to response to letters. Most prevalent problems were chosen as the topics.

A readability test on the DEFENDER, showed similar difficulty in reading levels as the manuals. Despite this fact, readership is enthusiastic and very supportive. While the DEFENDER serves to bridge the gap in the vast area of ignorance in rural areas, the following comment is in order:

Greater caution should be exercised in responses to medical problems. The danger of using this forum as a substitute for medical care should be discouraged.

#### 5.8 Kibwezi Rural Health Scheme

Detailed evaluation of this project was conducted by Professor Kagia. This report will be confined to overall issues.

Full operations at the Kibwezi Health Centre started only since May 1981 due to the delay in construction. All staff are seconded by GOK except for the two key positions of Project Coordinator and Clinical Officer. The following observations are made on the overall organization management and the implications for future projects.

- a. The project was designed with split responsibilities for the Project Coordinator and Clinical Officer, with overall project responsibility vested in the project officer at headquarters. In practice project operations are weakened by this system. The project officer with overall responsibility needs to be in the field for closer supervision, coordination and monitoring of activities.
- b. Whether the project should operate with a clinical officer, as well as project coordinator needs to be reviewed. The GOK system of rural health centres only allow for one clinical officer. As such, the question needs to be raised as to whether GOK's plan is feasible or not.
- c. The hiring of AMREF employees instead of GOK employees in the two key positions at Kibwezi is a missed opportunity. The training and preparation of GOK clinical officers in these positions will enhance the smooth transition of the project from AMREF management to GOK.
- d. The Rural Health Centre operations does not include sub centres nor dispensaries. Functionally, the use of Kibwezi RHC as the only operational base causes logistical problems. The distances for mobile clinics, CHWs and the people to reach service points lead to program inefficiency.

- e. Currently, the CHW program is the sole responsibility of the Project Coordinator. CHWs also assist in the mobile clinics operated by the Health Centre staff. However, the mobile clinic staff do not assume any teaching or supervisory responsibility for the CHWs. The delivery of services will be strengthened with reorganization. CHWs will be accountable to mobile team staff, and they in turn will be responsible for the supervision and continuing education of CHWs. Functions of CHWs are now vague. These need to be clearly defined.
- f. The attendances at both static and mobile clinics are very heavy. Whether this would be a temporary feature due to the novelty of services need to be determined. CHWs could be of particular help in organizing who should attend clinics and when. Guidelines need to be drawn up and CHWs trained in such assessments.
- g. The supply of drugs at the centre is based on the same pattern as GOK operated centres. This whole system needs careful analysis in light of population needs, if this centre is to serve as a model.
- h. Cost accounting systems, and preliminary monthly budgets for the Centre have been established. However, an annual review is needed of cost effectiveness, and of actual expenditures to run a rural health scheme. Accounts are currently maintained on a cash-accounting basis.
- i. The steering committee meetings chosen as the vehicle for close communication with MOH, have not been successful, for a variety of reasons. MOH staff have been receiving documents, and following the progress of the project from a distance. However, as changes are inevitable and necessary, in such a project, closer working relations are vital for the achievement of a viable and replicable system of health care.

Traininga. Refresher Courses

A total of six one day sessions, instead of the eight originally planned four day sessions, were held in the first two years of the project. They were aimed at health and development staff and local officials.

The need of in-service and continuing education cannot be over emphasized. The current training programs for clinical officers, community nurses and auxiliary staff do not fully prepare them to perform in a different and rapidly evolving field. Weaknesses need to be identified and appropriate courses planned for all levels of staff to meet the program needs.

AMREF's experience in training would be of particular value to GOK in redesigning curricula for the different cadres of health workers. A systematic evaluation of health workers knowledge, skills and performance in the field need to be documented, along with the types of knowledge and skills required for their health centre role.

b. Training of CHWs

A total of 80 CHWs were trained from four different sublocations. There are several observations to be made in this aspect of the project.

- i) Earlier in the report the lack of learning resources for CHWs was pointed out. The publication - Community Health Workers Manual for Kenya is still only a possibility.
- ii) Within AMREF there are different schools of thought as to the length of training, the role and functions of a CHW, the crucial question of remuneration and who should pay and above all whether CHWs should be given drugs to dispense.

c. The AMREF CHWs Support Unit has the most experience in this field, operating as facilitator between NGOs and governments in four East African countries. The staff of this unit have developed a sense of what modes of teaching seem most suitable for CHWs.

The great diversity that exists in almost every aspect of CHW programmes makes generalizations difficult. Whether CHWs strengthen community health services and are effective still remains to be proven. AMREF's Health Behaviour and Education Department has written a position paper on Community Health Workers<sup>3</sup>, yet their views on the

training and functions of CHWs are not reflected in the Kibwezi experiments.

The Kibwezi CHW training was held for a total period of 17 days instead of the proposed six weeks. A 3 day orientation at the Kibwezi Health Centre was followed by weekly one day sessions.

The selection of candidates by village leaders for the first two groups did not work out as expected. The CHW role was misconceived and candidates chosen expected a paid job at the end of their training. This led to a high drop out rate. The subsequent groups selected were given better explanations of their role and they are actively working in their communities.

Current experience that exists in training programs vary a great extent particularly in the following areas:

- i) duration of training
- ii) type of curriculum
- iii) educational level of trainees
- iv) relative emphasis on cure versus prevention
- v) balance of remuneration and time commitment
- vi) supervision and continuing education

Comparative research on subsequent groups of CHWs, testing the above variables would be of particular value in deciding on the appropriate model for training. Additional resources will be required for this type of research, and need to be identified.

Two evaluations of the CHW program were carried out, during the first two years of the project period. The first one in 1980, was conducted by the Health Behaviour and Education Department.

The evaluation report summarized all responses in narrative form. Attempts at quantitative analysis were not made. Conclusions drawn were that remuneration and uncertainty about the future were the most pressing problems. The need for more meetings with the entire community to discuss health problems, pinpoint obstacles and factors favourable to the program was also expressed.

AMREF's evaluation officer has completed the second evaluation of the CHW programme but the report is not yet ready. Preliminary findings show that CHWs are effective in some aspects of environmental sanitation. Behaviour change in habits concerning water use is a problem. The work load (200 homes per worker) was considered very heavy. Lack of drugs to dispense particularly, in remote areas, where no shopping facilities exist was another problem.

The community in general were receptive to the CHWs activities except for the school teachers who perceived them as a threat.

The community wanted the service of more mobile clinics.

CHWs wanted ID badges and AMREF has already designed, ordered and distributed badges with title in Kikamba 'Promoter of Community Health'. This identification has greatly enhanced the CHWs self concept and status in the community.

Discussions with the MOH official about CHW training confirmed that MOH considers this aspect a very big part of future rural health services. On the question of drugs, MOH feels that the policy should be flexible, reflecting the individual communities' needs.

Remuneration, in the experience of MOH will be necessary in the long run. Volunteer efforts can be depended upon only on a short term basis. Community support of such schemes need to be worked out. Some experience exists, but this is an area for further research.

6. AMREF'S CAPABILITY TO PLAN, MANAGE & EVALUATE

- 6.1 The growth of the Foundation has been dramatic between the years 1977 - 1980 with an average annual growth in expenditure of 43 percent. Primary health care projects were a new feature in the Foundation's activities and accounted for 32 percent of expenditures.

The sudden growth of activities, no doubt, caused some problems. Full credit should be given to the management for recognizing that all was not well within the Foundation. An objective third party was called in to study the management problems in 1980, and several recommendations were made.

The weaknesses pointed out in the report that are relevant to the Kibwezi project are as follows:

- a. "Project Management: This is one of the gravest weaknesses. In spite of good planning and strong liaison with donor agencies, the implementation and control of projects in the field is poor. Time tables are not met and necessary buildings are not built to schedule. "Start-up" responsibilities are given to those who are medically orientated. They are not qualified to do this work... the welfare of the staff involved seems always to be a low priority. This is especially so in the areas of salaries, allowances, housing and employment contracts"<sup>4</sup>.

The Kibwezi project reflects the above stated weaknesses.

As discussed earlier in the report, several weaknesses were observed in the Kibwezi Project. A full time field project coordinator responsible for all aspects of the project management is required. Given the constraint that GOK rural health centres expect the clinic officer to manage such projects, the AMREF model should train the clinic officer to assume such a role.

During the remaining term of the project, the project coordinator should assume full responsibility for all aspects of the project. Whether the current coordinator has the experience and background to assume such responsibility needs further review. The complexities of the project require a person with the education and experience in public health, clinical field work, teaching, supervision and pilot project implementation. The programs for the training of clinical officers in Kenya do not prepare them for such responsibilities. AMREF's continuing education programs should design courses and experiences to

complement existing programs. These courses in turn could be used by GOK for redesigning their training programs.

In the event the current coordinator is unable to assume full responsibility for the project an adviser should be recruited, with the clinical officer acting as counterpart. He should be trained to assume full responsibility by the end of the project.

Senior officials supported by this grant have done much to strengthen the planning, management and evaluation capacity of AMREF's overall rural health services. They are all dedicated skilled and professional workers, but they have been working under ever-increasing pressures, with AMREF's growth in activities. It should be noted, that this growth is positive as it gives the organization more depth and breadth and capability to cope with innovation.

Senior staff were particularly overworked, due to the unavailability of 2 junior staff. The Deputy Medical Director post is vacant. The candidate recruited did not work out. The Program/Planning Trainee position was filled successfully but the trainee was sent abroad to complete the Master's degree in Public Health.

The post of Evaluation Officer was created a year ago, and the salary is in part covered from the post of Deputy Medical Director. The use of funds for this particular post has greatly enhanced the program.

The capability of AMREF to evaluate its own work is a major strength. Many evaluation studies have been completed, but it is too early to assess whether recommendations of studies have been incorporated. The development of a monitoring and evaluation system is in progress, but the task remains to be completed.

The planning of activities for AMREF's programs is a major strength. For each project the goals and objectives are identified, with specific activities and output targets outlined. Additional resource requirements are also identified.

New projects proposals are formulated. Annual in-depth reviews of all on-going projects are made and progress reports written and published.

## EVALUATION REPORT

### Summary:

A trip was taken to Kibwezi to interview the Community Health Workers (CHWs), Community Leaders (CLs) and Kibwezi Health Centre Staff. The purpose of these interviews was to gather information in order to determine whether the objectives of the Operational Grant (OPG) to AMREF are being met in accordance with the Grant Agreement.

These objectives for AMREF were to assist GOK/MOH to assist in the development of an integrated and comprehensive rural health service system for Makindu Division of Kenya at Kibwezi.

### Results of Interviews and Discussions with the CHW, Community Leaders and Kibwezi Health Centre Staff

#### First Group interview of Kai CHWs:

The Group know that they were selected by (Mwethya groups) or the self-help groups and since that mode of selection was suggested to them they now think it is the best way of selecting Community Health Workers (CHWs). This group felt that the period between the time they were selected and sent for training was sufficient. It was one month waiting after they were selected to start training. Most of the CHWs felt this time was necessary to make arrangements at their homes, i.e. who was going to take care of the children and home when they are gone for 1 week. The majority of the CHWs have grasped their role of what they are supposed to be doing with their Community. They also demonstrated that they have retained a lot of information from their training. Their training covered areas such as:

- (a) Preventive disease information;
- (b) methods of digging pit latrine;
- (c) simple diagnosis and curative measures; and
- (d) record keeping.

The CHWs from Kai complained that they have not been supplied with drugs and the communities they serve expect them to have at least malariaquin or aspirins.

#### Issues of Remunerations:

The CHWs from Kai wanted, it known, that they are very unhappy and disappointed that they are not compensated for when they travel long distances using their own means, e.g. bicycles or bus fares. It appears the Kai CHWs were promised some reward of either cash or kind or that employment will result from their involvement as CHWs. That is why they feel let down. It is reported that 80-90% have already dropped out. The question then comes, how is the programme going to survive in this area with a high drop rate as that? The other group of CHWs interviewed were

from Muthingini sublocation. They, like the Kai Group knew their role and have retained a lot of material from their training. Although the Muthingini CHW group discussed the problem of long distances and the time they spend away from their work to help the Community, they interestingly did not complain about compensation or payment of any kind. We understand from AMREF the difference between this group and Kai CHWs can be explained by the way the initial introduction and sensitization was done. When the issue of payment arose with the Kai group, it was dodged or implied that some token or payment will be forthcoming while as when introduction and community sensitization was done with the Muthingini group, the AMREF staff involved was straightforward and left no doubt in their minds about payment. Therefore the Muthingini group is more enthusiastic and very committed with their work; while the Kai group is declining.

#### Impressions of the Community Being Serviced:

They (the Community served) know who the Community Health Workers are. They also know what they do. They appreciate the services given by the CHWs and they seem to connect the lessened trips to the hospital and Health Centres as a result of the teachings of the CHWs.

Some of the community explained the reason they have not been visited often by CHWs is because of the distance. Households are scattered and CHWs find it difficult to walk long distances. Although the community did not come out and say it, but they were implying that the CHWs should have some means of transportation - i.e. bicycle so they can get around better.

Other members of the community were happy with the disease preventive lessons they got from CHWs but they wished the CHWs could dispense some dawa and first aid medicine, i.e. bandages, band aids, antibiotic creams, etc.

Some members of the community wondered what was going to happen to the selected TBAs. They had not been called for training and they do not know why they were selected and then to be ignored.

#### Conclusions:

The community being served is appreciably aware of the good work that the CHWs do. Some members of the community feel helpless in that their fellow people - the CHWs walk for miles to help them without pay and because of poverty, although they recognize CHWs work and they know (they the CHWs) deserve some compensation, they are unable to pay them.

There is another set of members of the community who ridicule these CHW workers. They tell them if they were qualified enough or trusted by AMREF, first because of qualifications they would be paid and if trusted they will be given drugs to dispense. So they are not worth payment and not trustworthy. This has created bad feelings amongst some of the CHWs especially from Kai sublocation.

Looking at the objectives of the OPG to AMREF we can say the following:

- (a) AMREF HQs staff Project Coordinator and the Clinical Officer at Kibwezi Health Centre have managed well to sensitize the communities at Kai, Manglelete and Muthingini on preventive and basic curative medicine;
- (b) The Kibwezi Health Centre staff is overworked and given the number of hours each staff has to put in each day, it is unpredictable as to how long they will last;
- (c) Although the idea of the CHWs working without pay has caught up and even is being accepted by CHWs and the community, it is hard to say with certainty how long they will go on and what will motivate them to continue without reward; and
- (d) The integration of the activities of the Kibwezi Health Centre to the GOK Rural Health Scheme is not clearly visible at the moment.

USAID/HNP: Nellie Mwanzia  
November 10, 1981

Liaising with donor agencies and GOK officials as and when necessary is successful.

The coordination of activities and exchange of expertise between AMREF's departments seem to be a weak point. This mainly could be attributed to the very busy schedules of the staff and the individualism of some of the staff. As the organization grows bigger, the tendency to separatism among departments should be carefully avoided.

b. Financial Support

In the two years of the project's operations the budget has been underspent. This in part could be attributed to the late start of the Kibwezi Health Centre. Items such as drugs for the Centre were not purchased from project funds, due to the stipulation that pharmaceuticals purchased should be of U.S. source. Time delays, and procedural complications in the purchase of drugs from the U.S., were the main reasons for not using the budgeted funds. Table 1 displays the expenditures and balance of funds in the project.

Table 1

Estimated actual expenditure from 8/79 to 9/81

	<u>Expenditures</u>	<u>Balance</u>
Personnel	\$ 237,961	\$ 164,028
*Training	\$ 121,310	\$ 87,720
Commodities	\$ 32,643	\$ 47,414
Other Direct Costs	\$ 40,317	\$ 47,403
*Indirect Costs	<u>\$ 9,739</u>	<u>\$ 28,990</u>
Total	\$ 441,970	\$ 375,555
Budget amount for PY3		<u>\$ 273,220</u>
Budget underspent		\$ 102,335

Note

Training includes \$3,000 as estimated expenses for MPH trainee for 3 months.

Indirect costs include \$ 300 for N. Y. overhead expenses for 3 months.

The management study report also identified Financial Support as a weakness "Project Budgets are drawn up and are based on the annual activity plan. However, they are used for cash flow purposes and to keep Donor Agencies informed. They are not designed for or used by managers at head office or in the field for management control and planning purposes"<sup>5</sup>.

This observation still holds. Cost accounting systems serve more the purpose of accurate apportioning of charges to the various grants. The Kibwezi Health Scheme in particular, requires cost-benefit analyses if it is to serve as a model.

c. Personnel

The welfare of staff as observed in the Management report is a low priority. In this respect, management needs to bear in mind, that however dedicated and loyal the staff may be, tenure will depend on their personal welfare. Salaries and benefits need to be reviewed to meet the current market.

d. Other AMREF Rural Health Services

The evaluation of the Medical Radio Communications<sup>6</sup> was conducted in great detail, and the findings were discussed at a workshop in December 1980. Conclusions reached at this conference were that two-way radio communication was important for rural health facilities even though radios are hardly recognised as necessary or important parts of the equipment of remote rural health institutions. The increasing costs of running motor vehicles make radios an important alternative for the future.

There was no opportunity to review AMREF's mobile airborne medical services, including medical specialist outreach programmes by light aircraft. According to reports, supervisory trips are undertaken to assess programme performance and a workshop is planned for 1981 to discuss mobile airborne services.

7. CONCLUSION

The project has strengthened AMREF's overall capacity to plan, manage and evaluate rural health services. There is no doubt that AMREF provides leadership in the provision of rural health care. There are some weaknesses in the management of field projects. But, given AMREF's expert, motivated innovative and talented staff, these problems could be overcome, and alternate approaches found.

References

1. Project year 2 Annual Report - August 1980 - July 1981 for the Kibwezi Rural Health Scheme and other AMREF Training and Rural Health Programmes.
2. Peter Godwin - Report of an investigation into the Manual "Child Health" with Health Workers in Kenya and Tanzania.  
AMREF : November 1979.
3. Owuor-Omondi - Kibwezi Rural Health Scheme  
Position Paper, Number One  
AMREF : January 1979
4. M. Ndisi and D. Stoddart - Recommendations on the Development of Management and Organisation  
AMREF 1980 p. 10
5. Ibid. p. 10
6. Proceedings from a conference on Medical Radio Communications  
9 - 11 December 1980  
AMREF

Table 2

AMREF Manuals : Number of prints and reprints with estimates of annual demand in 1980 and 1981.

	Manual	First Run	No. of prints & reprints	Demand	
				1980	1981
R1	Child Health	1975	25,000	1906	4700
R3	Health Education	1976	14,000	1239	3200
R4	Obstetric Emergencies	1976	13,000	1814	2700
R5	Pharmacology & Therapeutics	1976	11,885	1675	2700
R2	Diagnostic Pathways	1977	4,000	No Copyright	
R6	Mental Health	1977	8,000	418	2100
R7	Communicable Disease	1978	5,000	2048	?
R8	The Hand	1979	2,000	960	650
R9	Epidemiology	1979	7,000	983	1330
R10	Management Schedules for Dispensaries	1979	2,000	?	2020
R11	Occupational Health	1979	4,000	1216	700
R12	Community Health	1981	2,000	-	?
G5	Therapeutic Guidelines	1980	2,000	925	800

Note

- a) Estimates of consumption are based on counts of stock at the start and end of a period plus the amount of new stock purchased.
- b) The demand for 1980 is based on stock counts at the start and end of the year.
- c) The 1981 demand is an estimate based on 9 month consumption in 1981.

## List of people interviewed:

Dr. E. M. Nordberg	Medical Director
Dr. R. Shaffer	Senior Medical Officer
Mr. A. Scotney	Department Head / Health Behaviour and Education
Sr. M. Memia	Public Health Nurse
Dr. K. Janovsky	Evaluation Officer
Mr. D. Lackey	Projects Director
Mr. Victor Masbayi	Projects Officer
Mr. D. White	Consultancy Coordinator
Mr. P. Godwin	Educational Officer
Mr. Rasul Gwadery	Chief Accountant
Mr. Fred Kiluva	Project Accountant

MOH

Dr. Maneno

MOH -