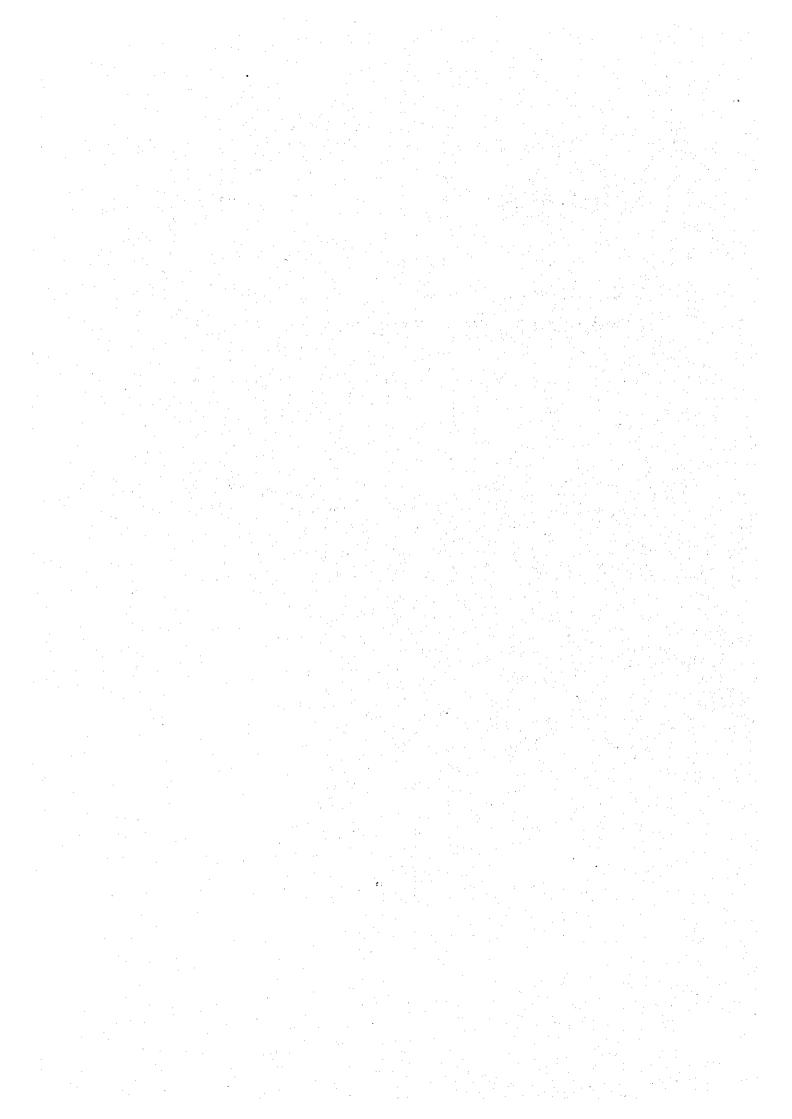
# **Chapter 17**

Concept Paper:
Disease Control Program



# 17 DISEASE CONTROL PROGRAM

# 17.1 MANAGING THE MALARIA MENACE

#### 17.1.1 Essential Information

#### **Project Title**

Managing the Malaria Menace Through an Integrated and Comprehensive Approach

# **Project Objectives**

To reduce mortality and morbidity due to malaria 50% and 30% of its 1998 level, respectively, among the residents of Kericho, Bomet, Nyamira, Kisii and Gucha (possibly the entire Nyanza Province)

#### **Project Location**

Kericho, Bomet, Kisii, Nyamira and Gucha

#### Target Beneficiaries

Being the exposed population, all the residents in Kericho, Bomet, Nyamira, Kisii and Gucha are the potential beneficiaries.

Specifically, however, the program would target the following groups:

- At the household level,
  - mothers who are the caretakers of children and responsible for cleanliness of the surroundings; and
  - fathers who usually decide on when to bring sick family members for medical consultation and whether to buy nets, curtains or coils against mosquitoes;
- At the community level,
  - women's groups and other organisations which are experienced or interested in producing and marketing anti-mosquito coils, curtains, nets, soaps or lotion;
  - local talents who can compose songs, cheers, poems and slogans; and

- traditional health practitioners as well as shopkeepers who dispense drugs.
- At the formal health sector level,
  - All district health staff who attend to patients, including laboratory technicians or trained microscopists;
  - Pharmacists and pharmacy clerks or attendants;
  - · Records officer and other staff involved in sentinel surveillance; and
  - Researchers.

# **Project Duration**

5 years

#### Implementing Agency/Body

Provincial Health Office
District Health Management Teams
Health Centre Management Teams
NGOs and other community-based organisations

# 17.1.2 Project Rationale

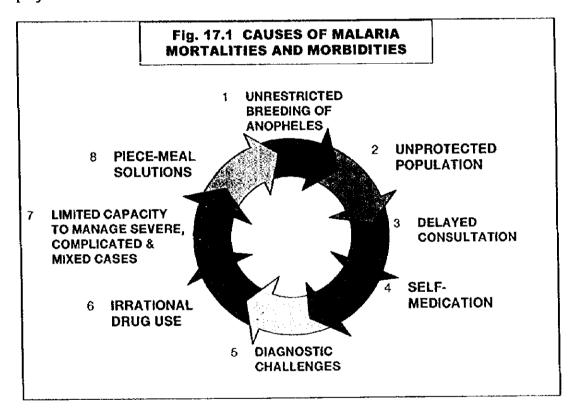
Malaria is the number one cause of all deaths in the Project Location. It affects all age groups. Even among children under the age of five years, malaria is the most common cause of mortalities. Furthermore, it exerts the heaviest burden on the health system as it is the most common reason for seeking medical consult and hospitalisations in public health facilities.

In the Study Area, there is so much room for improvement in the control of the spread of malaria. For one, cleaning of breeding sites is not routinely done even during the wet season. Only a few households use mosquito nets, mostly the untreated one, and an even fewer number would use coils. More importantly, some residents still carry some misperceptions about the etiology of malaria. For example, some believe that bad water, soil or air can transmit it; others claim it is due to eating fatty food.

Although patients or their caretakers have a high index of suspicion about having malaria, they usually procrastinate for about 3-5 days before seeking medical consult. In fact, many of them would take medicines bought from local shops (occasionally from pharmacies) prior to visiting licensed health facilities. Some of them would even prefer visiting herbalists to public health staff.

When patients finally reach authorised health facilities, the diagnosis of malaria would be made primarily based on clinical manifestations only and not receive any laboratory confirmation. It must be noted, however, that there are many diseases that are know to mimic the clinical signs and symptoms of malaria in the Project Location. Worse, the patients would be prescribed with drugs to which there is 80% probability of resistance already.

All these factors, among other things, contribute to the high mortality and morbidity due to malaria (Fig. 17.1). Not a single factor is more important than the others; all are equally critical to ensure success in controlling malaria. Certainly, piecemeal approach will help for a time but would make things worse in the long run. Hence, this project proposes an integrated and a comprehensive approach to managing the malaria menace. Considering that malaria is also the most common cause of morbidity and mortality in other parts of Kenya, and other African countries, it is necessary to look at a nationwide or even regional scenario while implementing this project.



Aside from the obvious and primary benefit of saving lives, this program would:

- reduce the burden of malaria on the household and the health system;
- mobilise the mothers, fathers and the rest of the community in taking a more
  pro-active role in routinely eliminating breeding sites and in using agents to
  physically protect the entire family from being bitten by mosquitoes;
- promote community participation in sustaining the availability and affordability of mosquito coils, nets, curtains, or soaps;
- institutionalise early detection and referral at the household and health facility level;
- ensure rational drug use and access to appropriate drugs; and

 provide demonstration sites, entomological and epidemiological data for the people living in other communities.

# 17.1.3 Project Components

The control of malaria needs an integrated approach in optimal timing. An effective and strategic project shall be formed, taking into account a fact that highland and lowland malaria are both closely related to each other. Thus, well-coordination among province and districts is strongly required.

The Project shall integrate two streams of activities into one package: Highland Malaria Control Program and Malaria Control Initiative.

### **Highland Malaria Control Project**

Highland malaria is strategically controllable and the situation is expected to be greatly improved, should appropriate and timely measures be given, because of its seasonality of outbreak. The following are proposed to be designed for the program:

- 1) Enhancement of dissemination of appropriate information through health education by RHF's staff (e.g., PHOs and PHTs);
- Enhancement of usage of adequate anti-malaria drugs based on periodical drug resistance monitoring and surveillance of the epidemics;
- 3) Reduction of incomplete treatment through the improvement of case-management (e.g., enhancement of blood examination and follow-up services);
- 4) Monitoring of epidemiological and meteorological indicators to prepare anticipated malaria outbreak; and

Preparation of strategic countermeasures against malaria outbreak in optimal timing through health education, vectorProject control, environmentally preventive measures and logistics of medicines and equipment.

#### Maiaria Control Initiative

To effectively initiate the project, emphasis should be placed on dissemination of appropriate information about malaria for the further enhancement of people's awareness through a deliberate malaria campaign. People, particularly small children in highland are sensitive to malaria. They are exposed to the danger in one or two times every year when malaria breaks.

Malaria outbreak in highland area is closely related to that of traditional malaria endemic area. Thus, an integrated method of malaria prevention and control should be conducted in both high and low areas. Therefore, the project location shall cover

Nyanza and Rift Valley Province. The project duration may be 3 consecutive years with the following key activities:

- 1) Publicizing Malaria Control Campaign and information on malaria through radio and TV (in liaison with the IEC production project);
- 2) Promotion of cottage factory to produce preventive instruments (e.g. pyrethrum bar, impregnated curtain and impregnated bed-net);
- 3) Awards for proposals of community-based preventive project (official recommendation for fund)
- 4) Distribution of impregnated mosquito nets for the communities where health committee is well organized and active (1,000 x 50 communities) and for pregnant women (1000 x 50 RHFs);
- 5) Training of village health workers at poor access communities (50 communities/ week x 4); and
- 6) Outreach health talk by PHTs and PHOs (50 communities/week x 4 = 200 communities)

The campaign needs to be coordinated with relevant agencies/ongoing programs such as: Bungoma Initiative Project by USAID, WHO, USAID, IFAD, DANIDA, SIDA, KEMRI, ICIPE, AMREF, etc.

#### 17.1.4 Project Inputs/Outputs

Project Input (to be elaborated after further consultation with implementing agency)

- Vehicles
- IEC production
- Revolving fund for cottage factory
- Training courses for village health workers (local NGOs)
- Mosquito nets (donor's support)

#### **Donor Inputs and Arrangement**

- Drug resistance monitoring supported by technical co-operation (by donors)
- Government puts emphasis on management of logistics

# **Expected Benefits/Output**

- O Awareness about transmission and adequate home care for malaria is enhanced.
- U Vector control measures are commonly taken, particularly in low land.
- O Active case detection and treatment for malaria positives, particularly for small children, at the beginning of outbreak season.
- Management for malaria cases is strengthened in both rural health facilities and hospitals.

#### Verifiable Indicator

- Proportion of infective Anopheles before and during peak season of malaria cases
- Proportion of high-risk breeding sites appropriately managed
- Proportion of households appropriately using at least one effective method of protection from mosquito bites
- Proportion of severe, complicated or mixed cases over total cases seen at the facilities
- Per cent of patients who self-medicated prior to seeking consultation (compared to baseline study)
- Proportion of clinical records reflecting compliance with diagnostic and case management protocols
- u Proportion of prescriptions complying with rational drug use
- Per cent of sample showing resistance to first-line and second-line drugs (compared to baseline survey)
- U Number of days first-line and second-line anti-malaria drugs are out of stock
- Number of days microscopy facility is non-functional
- Proportion of deaths due to severe, complicated and mixed infection cases over the total admissions due the same conditions
- O Proportion of annual health plans adopting a comprehensive and integrated approach to managing the malaria menace
- O No. of drug resistance monitoring

#### **Estimated Cost**

US\$ 0.20 million (Only facility and equipment)

# 17.1.5 Other Project Management Issues

# Project Linkages/Other Sector Linkage

Hospital Rehabilitation Project
Rural Health System Development Project
Community-Based PHC-Promotive and Preventive Health Care Project
District Health Service Education Programme
Bungoma Initiative Project (USAID)

# Relevant Agencies to be Coordinated

USAID WHO, KEMRI, ICIPE, AMREF IFAD, DANIDA, SIDA

# Important Assumptions/Conditions for the Project

Climate features will continue without fundamental change.

# Priority Project 1-1: HIGHLAND MALARIA CONTROL PROJECT

1. Project No.	2. Project Title							
P1-1	Highland Malaria Control Program							
3. Project Location	4. Target Beneficiaries		5. Project Ouration					
Nyanza Province,	People exposed to malaria outbreaks		5 years					
Rift Valley Province	2) Community Health Workers							
	PHOs, PHTs, PHNs, RHF's staff     Provincial and District Health Office							
6. Implementing Agen	cy / Body		7. Project Leve	al 6	Desirat Oriente			
Provincial Health Office	p. District Health Management Teams		Basic	ei   8.	Project Priority			
9. Summary of Objectives			- Danc		High			
Beduce modality and re	probidity due to malaria 50%, and 30% of their 1998 le	ual sannaali	ahe through					
(1) To improve case ma	anagement of malaria patients in all health facilities	vei, respectiv	reiy micogn:					
(2) To strengthen gover	rnmental structure/systems to prevent outbreaks of ma	laria in oroie	of location					
(3) To enhance people'	s awareness of malaria and to reduce prevalence of s	evere malari	a cases.					
10. Justification								
People in Highlands	, particularly small children, are sensitive to malaria. T	hey are expo	sed to malaria o	outbreaks on	ce or twice a year.			
- Maiana outoreaxs in	highland area are closely related with the traditional r hould be conducted in both high and low areas.	nalaria ender	mic areas. Thus,	, an integrate	ed control method of			
Result of surveys or	people's perception and health seeking behavior of n	rataria nation	ota fa a malaria	h	and the second second			
water/soil/air, usual	treatment only by anti-febrile drugs and delays to rece	iaiana paner Ne ovoner tro	us (e.y. maiana) Salmonti closifu	can be trans	mitted by bad			
snoulo de ennanceo								
<ul> <li>Management of cura</li> </ul>	ative services for malaria patients should be strengther	red, inc. mor	nitoring of drug r	esistance, re	duction of			
incomplete treatmen	nt, logistics of anti-malaria drugs and inpatients service	S.						
11. Expected Benefits	·	12. Verifiable Indicators						
<ul> <li>Awareness about tra</li> </ul>	ansmission and adequate home care for mataria is	- Reduction of delay of treatment (compared with the						
enhanced.		result of baseline data)						
Vector control meas     Astive cone detection	ures are commonly taken, particularly in low land.	<ul> <li>No. of households using preventive measures</li> </ul>						
- Active case detection small children, at the	n and treatment for malaria positives, particularly for ebeginning of outbreak season.	(compared with the result of baseline data)						
Management for ma	laria cases is strengthened in both rural health	No. and ratio of active case detection     No. of treatment completed						
	region ococco as street full telled by Dottl Third Health	No. of treatment completed     No. of drug resistance monitoring						
facilities and hospita	is.							
facilities and hospita 13. Important Assump	uls. Otions / Conditions for the Protect							
facilities and hospita  13. Important Assump Climate features will co	als. Otions / Conditions for the Project Intinue without fundamental change.							
facilities and hospita 13. Important Assume Climate features will co 14. Project Linkages /	als. Otions / Conditions for the Project Intinue without fundamental change. Other Sector Linkage	- No. of c	irug resistance r	monitoring	ated			
facilities and hospita 13. Important Assump Climate features will co 14. Project Linkages / USAID/Bungoma Proje	als. Otions / Conditions for the Project Intinue without fundamental change. Other Sector Linkage Intinue Without fundamental change.	- No. of c		nonitoring be Coordin	ated			
facilities and hospita 13. Important Assum Climate features will co 14. Project Linkages / USAID/Bungoma Proje Community-Based Pre	als. Otions / Conditions for the Project Intinue without fundamental change. Other Sector Linkage	- No. of c	irug resistance r ant Agencies to	nonitoring be Coordin	iated			
facilities and hospita  13. Important Assump Climate features will co  14. Project Linkages / USAID/Bungoma Proje Community-Based Pre Education Program	uls.  otions / Conditions for the Project  ontinue without fundamental change.  Other Sector Linkage  ct, Rural Health System Improvement Project,  ventive/Promotive Health Care Project, District	- No. of o	frug resistance r ant Agencies to nistry of Land, K	nonitoring be Coordin	nated			
facilities and hospita 13. Important Assum Climate features will co 14. Project Linkages / USAID/Bungoma Proje Community-Based Pre	uls.  otions / Conditions for the Project  ontinue without fundamental change.  Other Sector Linkage  ct, Rural Health System Improvement Project,  ventive/Promotive Health Care Project, District	15. Releva USAID, Mi	frug resistance r ant Agencies to nistry of Land, K Inputs	be Coording	iated 18. Est'd Cost*			
facilities and hospita  13. Important Assump Climate features will co 14. Project Linkages / USAID/Bungoma Proje Community-Based Pre Education Program  16. Major / Key Activity	uls.  Otions / Conditions for the Project Intinue without fundamental change.  Other Sector Linkage Intinue Without fundamental change.  Other Sector Linkage Intinue Without fundamental change.  Intinue Without fundamental change.  Intinue Without fundamental change.	- No. of o	frug resistance r ant Agencies to nistry of Land, K Inputs	nonitoring be Coordin				
facilities and hospita  13. Important Assum; Climate features will co  14. Project Linkages / USAID/Bungoma Proje Community-Based Pre Education Program  16. Major / Key Activit  In Monitoring of drug re	als.  Otions / Conditions for the Project Intinue without fundamental change.  Other Sector Linkage Intinue Without fundamental chan	15. Releva USAID, Mi	frug resistance r ant Agencies to nistry of Land, K Inputs	be Coording				
facilities and hospita  13. Important Assump Climate features will co  14. Project Linkages / USAID/Bungoma Proje Community-Based Pre Education Program  16. Major / Key Activit  Monitoring of drug re	otions / Conditions for the Project Intinue without fundamental change. Other Sector Linkage Intinue without fundamental change. Other Sector Linkage Intinue without fundamental change. Other Sector Linkage Intinue without fundamental change. Int	15. Releva USAID, Mi 17. Major Personne	Irug resistance r ant Agencies to nistry of Land, k Inputs I Materials	be Coording				
facilities and hospita  13. Important Assump Climate features will co  14. Project Linkages / USAID/Bungoma Proje Community-Based Pre Education Program  16. Major / Key Activit  Monitoring of drug magnetic production of	als.  Ditions / Conditions for the Project Intinue without fundamental change.  Other Sector Linkage  ct, Rural Health System Improvement Project, Inventive/Promotive Health Care Project, District  ties  esistance  prological data  vector control instruments, e.g. mosquito net (cloth)	15. Releva USAID, Mi 17. Major Personne	Irug resistance r ant Agencies to nistry of Land, K Inputs I Materials x	be Coording EMRI Funds	18. Est'd Cost'			
facilities and hospita  13. Important Assump Climate features will co  14. Project Linkages / USAID/Bungoma Proje Community-Based Pre Education Program  16. Major / Key Activit  Monitoring of drug in Monitoring of meteo  Local production of mosquito coil, impre	otions / Conditions for the Project Intinue without fundamental change. Other Sector Linkage Intinue without fundamental change. Other Sector Linkage Intinue without fundamental change. Interest fundamental change. Inte	15. Releva USAID, Mi 17. Major Personne	Irug resistance r ant Agencies to nistry of Land, K Inputs I Materials	be Coording				
facilities and hospita  13. Important Assump Climate features will co  14. Project Linkages / USAID/Bungoma Proje Community-Based Pre Education Program  16. Major / Key Activit  Monitoring of drug magnetic forms Local production of mosquito coil, impre Uncrease of microsco	otions / Conditions for the Project Intinue without fundamental change. Other Sector Linkage Intinue without fundamental change. Other Sector Linkage Intinue without fundamental change. Interest of the System Improvement Project, wentive/Promotive Health Care Project, District ties Ities Interest of the System Improvement Project, wentive/Promotive Health Care Project, District ties Ities Interest of the System Improvement Project, District ties Interest of the System Improvement Project, District ties Ities Interest of the System Improvement Project, District ties It	15. Releva USAID, Mi 17. Major Personne	Irug resistance r ant Agencies to nistry of Land, K Inputs I Materials x	be Coording EMRI Funds	18. Est'd Cost'			
facilities and hospita  13. Important Assump Climate features will co  14. Project Linkages / USAID/Bungoma Proje Community-Based Pre Education Program  16. Major / Key Activit  Monitoring of drug in Monitoring of meteo  Local production of mosquito coil, impre Uncrease of microso education for Microso education for Microso	otions / Conditions for the Project Intinue without fundamental change. Other Sector Linkage Intinue without fundamental change. Other Sector Linkage Intinue without fundamental change. Interest of the System Improvement Project, wentive/Promotive Health Care Project, District with ties Interest of the System Improvement Project, District with ties Interest of the System Improvement Project, District with ties Interest of the System Improvement Project, District with ties Interest of the System Improvement Project, District with ties Interest of the System Improvement Project, District with ties Interest of the System Improvement Project, District with ties Interest of the System Improvement Project, District with ties Interest of the System Improvement Project, District with ties Interest of the System Improvement Project, District with ties Interest of the System Improvement Project, District with ties Interest of the System Improvement Project, District with ties Interest of the System Improvement Project, District with ties Interest of the System Improvement Project, District with ties Interest of the System Improvement Project, District With ties Interest of the System Improvement Project, District With ties Interest of the System Improvement Project, District With ties Interest of the System Improvement Project, District With ties Interest of the System Improvement Project, District With ties Interest of the System Improvement Project, District With ties Interest of the System Improvement Project, District With ties With tie	15. Releva USAID, Mi 17. Major Personne X	Irug resistance r ant Agencies to nistry of Land, k Inputs    Materials   X	be Coording EMRI Funds	18. Est'd Cost* US\$ 0.1 M.			
facilities and hospita  13. Important Assump Climate features will co 14. Project Linkages / USAID/Bungoma Proje Community-Based Pre Education Program  16. Major / Key Activit  Monitoring of drug m Monitoring of meteo Local production of mosquito coil, impre Uncrease of microso education for Microso education for Microso C Enhancement of act	otions / Conditions for the Project solutions / Conditions for the Project solutions without fundamental change.  Other Sector Linkage oct, Rural Health System Improvement Project, ventive/Promotive Health Care Project, District ties  esistance prological data related curtain (by revolving fund) opic diagnosis in rural health facilities, inc. continuing scopist ive case detection in rural health facilities	15. Releva USAID, Mi 17. Major Personne X	Irug resistance r ant Agencies to nistry of Land, k Inputs    Materials   X	be Coording EMRI Funds	18. Est'd Cost* US\$ 0.1 M.			
facilities and hospita  13. Important Assum; Climate features will co  14. Project Linkages / USAID/Bungoma Proje Community-Based Pre Education Program  16. Major / Key Activit  Monitoring of drug r  Monitoring of meteo  Local production of mosquito coil, impreseducation for Microsceducation for Micros	otions / Conditions for the Project solutions / Conditions for the Project solutions without fundamental change.  Other Sector Linkage ct, Rural Health System Improvement Project, ventive/Promotive Health Care Project, District ties  esistance esistance rological data vector control instruments, e.g. mosquito net (cloth), gnated curtain (by revolving fund) opic diagnosis in rural health facilities, inc. continuing scopist ive case detection in rural health facilities ic system, inc. supply of anti-malaria drugs	15. Releva USAID, Mi 17. Major Personne X X	Irug resistance r  ant Agencies to nistry of Land, k  Inputs  I Materials  X  X	be Coording EMRI Funds	18. Est'd Cost* US\$ 0.1 M.			
facilities and hospita  13. Important Assum; Climate features will co  14. Project Linkages / USAID/Bungoma Proje Community-Based Pre Education Program  16. Major / Key Activit  Monitoring of drug n  Monitoring of meteo  Local production of mosquito coil, impreseducation for Microseducation for Microseduc	otions / Conditions for the Project Intinue without fundamental change. Other Sector Linkage Intinue without fundamental project, wentive/Promotive Health Care Project, District Ities Intinue without fundamental care from the strict fundamental wector control instruments, e.g. mosquito net (cloth), included curtain (by revolving fund) Intinue without fundamental fundamenta	15. Releva USAID, Mi 17. Major Personne X X	Ing resistance rank Agencies to nistry of Land, K Inputs I Materials X X X X	be Coording EMRI Funds	18. Est'd Cost* US\$ 0.1 M.			
facilities and hospita  13. Important Assum; Climate features will co  14. Project Linkages / USAID/Bungoma Proje Community-Based Pre Education Program  16. Major / Key Activit  Monitoring of drug n  Monitoring of meteo  Local production of mosquito coil, impreseducation for Microseducation for Microseduc	otions / Conditions for the Project Intinue without fundamental change. Other Sector Linkage Intinue without fundamental project, wentive/Promotive Health Care Project, District Ities  Iti	15. Releva USAID, Mi  17. Major Personne  X  X	Inputs  Materials  X  X  X	be Coording EMRI Funds	18. Est'd Cost* US\$ 0.1 M.			
facilities and hospita  13. Important Assum; Climate features will co  14. Project Linkages / USAID/Bungoma Proje Community-Based Pre Education Program  16. Major / Key Activit  Monitoring of drug in Monitoring of meteo  Local production of mosquito coil, impre Lincrease of microso education for Microso education for Microso Usental Color Strengthening logist  Enhancement of our positives, particular Strengthening healt	otions / Conditions for the Project Intinue without fundamental change. Other Sector Linkage Intinue without fundamental project, wentive/Promotive Health Care Project, District Ities Intinue without fundamental care from the strict fundamental wector control instruments, e.g. mosquito net (cloth), included curtain (by revolving fund) Intinue without fundamental fundamenta	15. Releva USAID, Mi  17. Major Personne  X  X	Ing resistance rank Agencies to nistry of Land, K Inputs I Materials X X X X	be Coording EMRI Funds	18. Est'd Cost* US\$ 0.1 M.			
facilities and hospita  13. Important Assum; Climate features will co  14. Project Linkages / USAID/Bungoma Proje Community-Based Pre Education Program  16. Major / Key Activit  Monitoring of drug n  Monitoring of meteo  Local production of mosquito coil, impre Increase of microso education of Micros cultural coil in more Enhancement of act  Strengthening logist  Enhancement of cuipositives, particular  Strengthening healt committees	otions / Conditions for the Project Intinue without fundamental change.  Other Sector Linkage of Rural Health System Improvement Project, wentive/Promotive Health Care Project, District ties  esistance Project and Project	15. Releva USAID, Mi  17. Major Personne  X  X  X	Ing resistance rank Agencies to nistry of Land, K Inputs I Materials X X X X X	be Coording EMRI Funds	18. Est'd Cost*  US\$ 0.1 M.  US\$ 0.05 M.			
facilities and hospita  13. Important Assump Climate features will co  14. Project Linkages / USAID/Bungoma Proje Community-Based Pre Education Program  16. Major / Key Activit  Monitoring of drug in Monitoring of meteo  Local production of mosquito coil, impre Lincrease of microso education for Microso education for Microso Usentancement of act Strengthening logist  Enhancement of cur positives, particular Strengthening heatt committees  Introduction of stance	otions / Conditions for the Project Intinue without fundamental change. Other Sector Linkage Intinue without fundamental project, wentive/Promotive Health Care Project, District Ities  Iti	15. Releva USAID, Mi  17. Major Personne  X  X  X	Ing resistance rank Agencies to nistry of Land, K Inputs I Materials X X X X X	be Coording EMRI Funds	18. Est'd Cost*  US\$ 0.1 M.  US\$ 0.05 M.			
facilities and hospita  13. Important Assum; Climate features will co  14. Project Linkages / USAID/Bungoma Proje Community-Based Pre Education Program  16. Major / Key Activit  Monitoring of drug in Monitoring of meteo  Local production of mosquito coil, impre Increase of microsoreducation for Microsoreduc	otions / Conditions for the Project Intinue without fundamental change.  Other Sector Linkage Intinue without fundamental project, wentive/Promotive Health Care Project, District  Ities  esistance Intinue without fundamental change Intinue with fundamental well for the fundamental fundam	15. Releva USAID, Mi  17. Major Personne  X  X  X	Ing resistance rank Agencies to nistry of Land, K Inputs I Materials X X X X X X	be Coording EMRI Funds	18. Est'd Cost*  US\$ 0.1 M.  US\$ 0.05 M.			
facilities and hospita  13. Important Assump Climate features will co  14. Project Linkages / USAID/Bungoma Proje Community-Based Pre Education Program  16. Major / Key Activit  Monitoring of drug in Monitoring of meteo  Local production of mosquito coil, impre Increase of microso education for Microso education for Microso Ustrengthening logist  Enhancement of act Strengthening logist  Enhancement of cur positives, particular Strengthening heatt committees  Introduction of stand mataria  19. Estimated Total C	otions / Conditions for the Project Intinue without fundamental change.  Other Sector Linkage Intinue Without Sector Linkage Intinue Without Wit	15. Releva USAID, Mi  17. Major Personne  X  X  X	Ing resistance rank Agencies to nistry of Land, K Inputs I Materials X X X X X X	be Coording EMRI Funds	18. Est'd Cost*  US\$ 0.1 M.  US\$ 0.05 M.			
facilities and hospita  13. Important Assump Climate features will co  14. Project Linkages / USAID/Bungoma Proje Community-Based Pre Education Program  16. Major / Key Activit  Monitoring of drug in Monitoring of meteo  Local production of mosquito coil, impre Lincrease of microso education for Microso education for Microso Usentancement of act Strengthening logist  Enhancement of cui positives, particular Strengthening healt committees  Introduction of stand malaria  19. Estimated Total C  20. Necessary Extern	otions / Conditions for the Project Intinue without fundamental change.  Other Sector Linkage Intinue Without Market Market Market Without Market Market Wester Project, District  Ities	15. Releva USAID, Mi  17. Major Personne X X X	Ing resistance rank Agencies to nistry of Land, K Inputs I Materials X X X X X X X	be Coording EMRI Funds	18. Est'd Cost*  US\$ 0.1 M.  US\$ 0.05 M.			
facilities and hospita  13. Important Assum; Climate features will co  14. Project Linkages / USAID/Bungoma Proje Community-Based Pre Education Program  16. Major / Key Activit  Monitoring of drug r  Monitoring of meteo  Local production of mosquito coil, impreseducation for Microse education for Microse Enhancement of act  Strengthening logist  Enhancement of cupositives, particular committees  Introduction of standmalaria  19. Estimated Total C  20. Necessary Extern  Drug resistance monitores	otions / Conditions for the Project Intinue without fundamental change.  Other Sector Linkage Intinue Without Sector Linkage Intinue Without Wit	15. Releva USAID, Mi  17. Major Personne  X  X  X	Ing resistance rank Agencies to nistry of Land, K Inputs I Materials X X X X X X	be Coording EMRI Funds	18. Est'd Cost*  US\$ 0.1 M.  US\$ 0.05 M.			

# 17.2 REPRODUCTIVE AND CHILD HEALTH

# 17.2.1 Essential Information

#### **Project Title**

Child Health Card Development Project

#### **Project Objectives**

To improve management of reproductive and child health service through development of child health card.

# **Project Location**

Kericho, Bomet, Kisii, Nyamira, and Gucha (possible one of them)

#### **Target Beneficiaries**

Mothers and Children Under Five in the Study Area

#### **Project Duration**

1 years

#### Implementing Agency / Body

District Health Management Teams / Preventive and Promotive Health Department, Ministry of Health

# 17.2.2 Project Rationale

#### Child Health

According to the death registration at district civil registers in Kisii, Kericho, and Bomet, malaria and acute respiratory tract infection, especially pneumonia, are the most serious health problems for children under five. They account for large proportions (30 to 50 %) of all diseases causing child mortality.

Following the above, Malnutrition and anaemia are ranked between the second and the fourth cause of death for children under five in the all districts, and measles emerges as the fourth cause of death in both Bomet and Kisii and the seventh in Kericho. Those three diseases account for 13 to 17% of all diseases causing child mortality.

In the Study Area, malnutrition is not only one of the major causes of death among children but also a predisposing factor to the above infectious diseases. In addition, nutrition status is applied to one of indicators of health, economic and social development of communities. Welfare Monitoring Survey 1994 reported that 40.5% of sampled children in Kisii and 31.8% of sampled children in Nyamira were stunted. The data compiled from the district hospitals revealed that the proportion of underweight children (below third reference percentile) account for 10% in Kisii and 23% in Gucha.

For those children who need nutritional rehabilitation or supplementary food, they would be theoretically referred to and followed by district nutritionists working at district hospitals. However, only few patients from remote area actually attend the supplementary food programme. If food resources are once identified and available in the communities where such children live in, it seems to be easier for community health workers to follow the patients on the advice of nutritionists and with the programme support of the districts.

It is observed that acute severe anaemia leading to hospital admission is mainly related to sever malaria. While its importance on primary prevention to malaria and pregnancy, little is taken and applied into nutrition and MCH programme.

Despite the expansion of the Service Delivery Points (SDPs), immunisation coverage is low, in particular measles of KEPI programme. It is assumed that the low coverage of measles attributes to drop out of mothers' attendance since vaccination of measles usually comes 9 months after the birth.

#### A Child Health Card as a Recording / Monitoring Tool

According to a direct observation at a few health centres, only one tenth of mothers carried "Child Health Card" which hold the information of immunisation and growth monitoring. If the card sufficiently distributed to all pregnant mothers and properly recorded by health workers, it gives important information on child health for both mothers and health providers.

There is chronic shortage of the card due to financial problem. Therefore, mothers are obliged to buy a small notebook as a substitute to the card when they attended at RHFs.

In contrast, RHFs produce much information through collecting data and records from the attendant of facilities. However, the information is not accurate and never used for statistical purpose for existing programme at the district. Many of wall posters in the facilities, which guide control of diarrhoea and safe sex etc., were in questionable in terms of effectiveness and active participation.

The MoH is planning to start a vitamin A supplement programme as well as establishing a national surveillance system. In countries where such a programme has been implemented, there was not only an improvement in Vitamin A status of the population but also a significant increase in their haemoglobin level.

The proposed project is to develop and design more integrated, but simple economic sound Child Health Card.

# 17.2,3 Project Components

## a. Design and Development of Child Health Card

The proposed project places the Child Health Card as a key tool for improvement of child health programme. In fact, the card consists of growth monitoring and immunisation part responding health problems such as malnutrition and measles. However, there is a room for improvement of the card in terms of its utilisation increase and integration with other important health issues.

In order to fully utilise the card, the inclusion of community health workers and mothers should be considered as prime user of the card so that the improved card will be applied to community - based approach like a baby-weighing programme.

The following part should be considered to integrate into the card. The text and appearance should be simple but enough to hold necessary part for recording and information to the both health provider and mothers.

For Health Providers

Environment - Access to safe drinking water Vitamin A supplement - New programme

For Mothers: Knowledge for High Risk Behaviour

Accident - Precaution on Burn / Traffic Accident Nutrition - Sign of Malnutrition ARI - Care of New-born Diarrhoea- Oral Dehydration Salts Immunisation - Importance of compliance Alternatively, the card can be developed more sophisticated one including Maternal Health focusing antenatal, birth, and postnatal care.

Design should be simple but acceptable to cultural and social background.

# b. A test of Making Use of Improved Child Health Card.

A few health centres will be selected for testing a few kinds of improved child health card as well as community health workers. Evaluation method and criteria for the improved card will be designed with a team consists of the officer in charge for MCH from MoH, a MCH specialist and officers in charge from the district. Training programme for health workers for the health centres and community health workers will be designed and implemented by the district staff with a help of the MCH specialist.

It is recommended that the community based programme aims to promote the use of the improved child health card in targeting specific objectives. Identification of nutritious food in community and baby-weighing programme can be linked with the use of the improved child health card.

#### c. Design a Plan for Surveillance System

The use of the card as periodical statistical purpose and programming should be explored in order to support a population based planning. Weight and height will be most simple indicator that describes the overall health status since there is no quantitative indicators available in the Study Area. Simple manual for surveillance system using the card will be designed.

# 17.2.4 Project Inputs / Outputs

#### **Expected Benefits / Outputs**

- Child health card improved
- Community-based programme (including training) implemented
- Surveillance system using the improved child health card designed

# Verifiable Indicators

- Number of options with improved child health card
- Number of trained health workers, community health workers
- Manual of surveillance system

#### Important Assumptions / Conditions for the Project

The policy is continuously supportive to the proposed project

# Project Linkages / Other Sector Linkage

A District Health Service Education Programme, National KEPI and Reproductive Health Programme

# **Project Components and Major Activities**

- (1) Design at least a few improved child health card
- (2) Design and implement a training programme for making use of the improved child health card
- (3) Design and establish relationship with self help groups that are interested in community based health programme.
- (4) Conduct a test for making use of the improved child health card at selected health centres and community -based programme
- (5) Evaluate and modify the improved child health card
- (6) Develop a plan for surveillance system using child health card.

#### 17.2.5 Donor Assistance

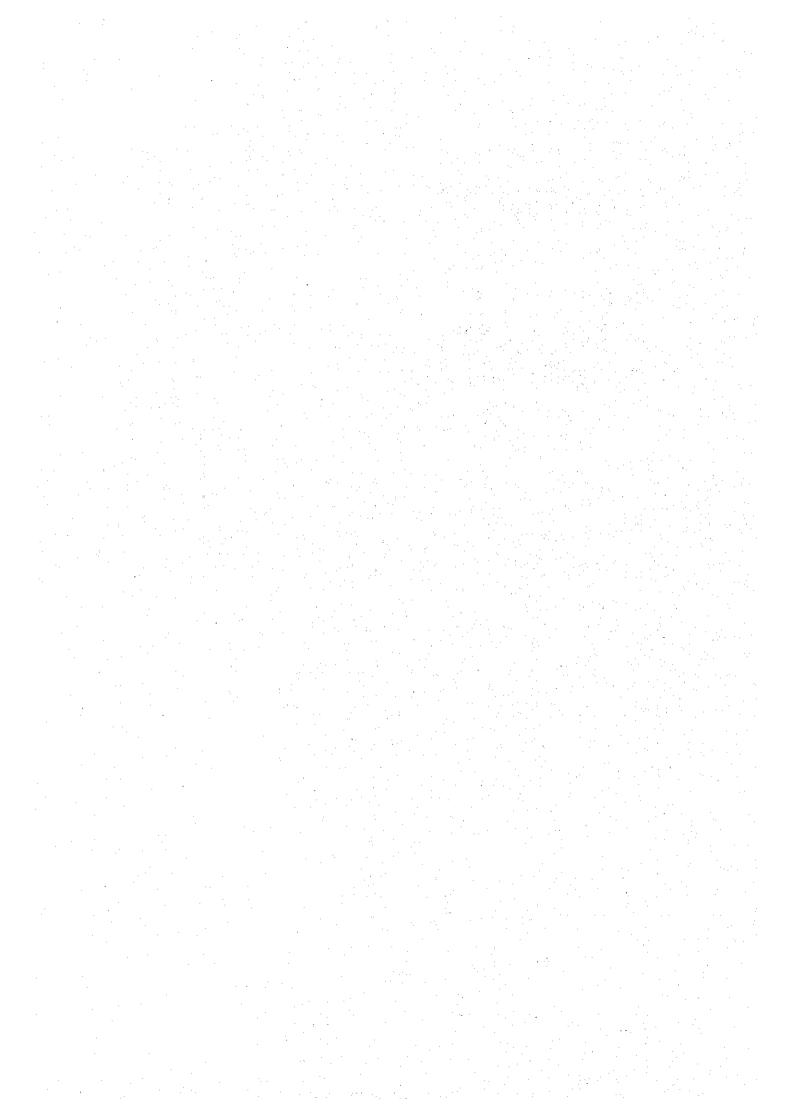
Technical assistance by a MCH specialist/social marketing specialist will be required for the entire process of the proposed project.

# Priority Project 1-2: REPRODUCTIVE AND CHILD HEALTH PROMOTION PROJECT

1. Project No.	2. Project Title							
P1-2		and Child Health Promotion	Oroinal					
11-2	reproductive a	ano Chao neaan Promotio	rroject					
3. Project Location	4. Target Beneficiarles		5 Prolo	N Duration				
	Kericho, Bomel, Kisii, Nyamira, All the mothers and child			3. Projec	ct Duration			
Gucha				3 years				
centres								
6. implementing Age	vhoR Lyans	centes		7 Draine	ad Laurat	Lo Darland Division		
Project Manageme	h Management Teams / MC	وم فضر لياه	7. Projec		8. Project Priority			
MOH	in. District real	i management leams) MC	an unicui	MIGHTON	n / Basic	High		
	oring: Health Co	ntre Staff Management Te	0000					
9. Summary of Obje	oling. Health Ce	ine Stan Wanagement Te	ams	<u> </u>		<u></u>		
To improve manage	unives Smoot alkaaradi	ration and ability of the con-						
information system	smear or rebroor	uctive and child health sen	/ice throu	igų gevejo	pment of p	population based		
illioittialion system								
10. Justification					·	····		
	mala a a manusia.	<b>5</b>						
in the region	opie community	-based intervention could t	ring ben	efit and mo	tivale the	caretakers of children		
in the region						ł		
• intervention can c	oring about user	ul data and information to	program	design and	d monitorir	)g		
11. Expected Benefit	•		12. Veri	liable Indic	alors			
<ul> <li>Child health card</li> </ul>	or Maternal Chil	d Health Card developed	Num	ber of care	etakers inv	olved in the develop-		
<ul> <li>Improved child h</li> </ul>	ealth card / MC	CH Card tested and pro-	ment		ranoio ni	oned in the develop		
moled		μιο μιο		er of anot	ed cases	of statistics produced		
<ul> <li>Surveillance syst</li> </ul>	em usina child	health card planned and	from	improved o	erd	or statistics produced		
applied to program	n management	risant cara planted and	"``"	mpiorca	aru			
13. Important Assum	ptions / Condition	ons for the Project	<u> </u>					
MOH/ PMO support	ort and approve	this trial as necessary step	) for man	acorial rar	aoualian			
<ul> <li>Key players include</li> </ul>	dino caretakers	within the project are well	ouidod k	ayenanen Stholoomi	iovation			
14. Project Linkages	/ Other Sector L	inkage	15. Relevant Agencies to be Coordinated					
Rural Health System	n Improvement	Program	National KEPI and Reproductive Health Program					
District Health Serv	ice Education P	rogram	Mations	u NEFI alle ul Võtomio	o neproou	ctive Health Program		
16. Major / Key Activ	Ities		National Vitamin A Supplement Program  17. Major Input  18.Estimated Cost					
— · · · · · · · · · · · · · · · · · · ·			Man	Materials	Constr	To.Estimated Cost		
			''''	Materials	uction			
<ul> <li>Design and deve</li> </ul>	lop mother friend	dly and useful child health	х		OCHOIL			
card / MCH card			[		i .	1		
<ul> <li>Design and cond</li> </ul>	luct a developm	ent survey for improved	x	x	<del></del>			
child health card	with both facility	r-based and community-	1 ^ [	^				
based program		· · · · · · · · · · · · · · · · · · ·						
☐ Demonstrate and	d evaluate the us	se of improved child	x	x	<del> </del>	· · · · · · · · · · · · · · · · · · ·		
health card / MCH card at selected health centres			^	^				
Develop surveillance system by using data of improved								
child health card		•	×		,			
Propose sustain.	ution mechanism to im-	×		<del>   </del>	·			
prove its availability at peripheral level								
19. Estimated Total (	Cost		II.		L			
20. Necessary Inputs	_							
Responsible persor	al from relevant	unit of MOH participate	х	<del></del>	ו			
in the project		•						
Technical Assistance by MCH / Social Marketing specialist					<u> </u>			
(Donor)		х						

# **Chapter 18**

Concept Paper:
District Hospital
Rehabilitation Program



# 18. DISTRICT HOSPITAL REHABILITATION PROGRAM

# 18.1 ESSENTIAL INFORMATION

#### **Project objectives**

To improve the quality of essential services and expand critical diagnostic and treatment capacities of District Hospitals.

To strengthen the District Hospitals in managing referrals to and from Rural Health Facilities in the catchment area.

As a result of project output, the proportion of referral case to the total patients will be increased 3 times higher than the proportion of current level. (Bomet, Gucha, Kisii, Nyamira: 3%, Kericho 15%)

#### **Project Area**

Kericho, Bomet, Nyamira, and Kisii District

#### Target beneficiaries

All residents in the catchment area of Kericho, Bomet, Nyamira and Kisii District Hospitals

#### Implementing agency

District Health Management Board (DHMB) and District Health Management Team (DHMT)

#### 18.2 PROJECT RATIONALE

It is assumed that the deteriorating conditions of facilities and equipment hinder the improvement in quality of services provided at the district hospitals. Over the years, there has been no major rehabilitation due to the chronic financing problem even if the demand for hospital services has exceeded the capacity, particularly in Kericho and

Kisii. The bed occupancy rate of Kisii is, on the average, 200% of its capacity; but it reaches 550% during malaria season.

Based on the MoH standards, at least a district hospital should be located in every district. However, there is no district hospital yet in Gucha and the one in Bomet has not provided inpatient services. At present, there are three functioning DH in the Study Area. Considering the other hospitals that are operating, the number of hospitals per 100,000 people is almost 1.1.

Comparing Kisii DH from Kericho DH, the former has a wider potential catchment population that goes beyond its geo-political boundaries. In fact it serves more than one million people, including those residing in Nyamira, Gucha and other surrounding districts where curative services are hardly available.

On the other hand, the roles and responsibilities of the DHMTs, DHMBs, and the proposed Hospital Management Boards (HMBs) have not been clearly differentiated.

In addition, some hospitals do not have organisational structures. Their performance and the quality of services have never been assessed. In fact, some management systems have to be redesigned. In particular, the accounting system needs to be improved to incorporate the requirements of income and expenditures related to cost-sharing.

Despite their role and wide service catchment area, the hospitals are under-funded (the financing gap was estimated to be 41%). This has contributed to the worsening of service quality, deterioration of building, equipment and infrastructure. It seems there is a lack of proper planning of buildings and maintenance by users.

Unavailability and deterioration of medical equipment hampers the diagnostic capability of the DH. In addition, the Hospital Maintenance Unit is very limited in terms of its technical capability and financing.

#### 18.3 PROJECT COMPONENTS

In general, the proposed project should cover the following areas:

- 1) Facilities that need comprehensive improvement and rehabilitation:
  - Kericho District Hospital: Comprehensive facility rehabilitation and replacement of essential medical equipment
  - Kisii District Hospital: Comprehensive facility rehabilitation and replacement of essential medical equipment
- 2) Facilities that need partial improvement and rehabilitation:
  - Longisa District Hospital (Bomet): Supplementation of essential medical equipment.
  - Nyamira District Hospital: Minor rehabilitation of building and facilities, and

replacement of diagnostic medical equipment.

- 3) Enhancement of hospital management systems in all district hospitals
- 4) Revitalisation of the maintenance system in all district hospitals

# 18.3.1 Rehabilitation of Facility and Equipment

#### a. Kericho DH

#### (1) Layout Plan

In order to make the hospital function efficiently; the functional layout plan should be rearranged according to the basic logical circulation pattern.

# (2) Facility Components

Some facilities such as Casualty, Amenity ward, and Central Supply etc. are required to be constructed in accordance with the MoH's standard. As for the casualty, since the Kericho DH is located along the major highway from the Western and Nyanza provinces, a massive number of seriously injured patients by road traffic accidents are brought in the hospital. Therefore the necessity of the improvement of the casualty function is very high.

# (3) Service Capacity

The Kericho DH accepts about 250-outpatient attendance daily with about 45 in-patient admissions on the average. The number of outpatients will increase by 6% annually. The average of BOR in Kericho DH in 1997 was 106%. Though the number of in-patients is expected to increase in future, the target is to reduce to 80% the BOR by strengthening the capacity of staff.

#### (4) Building Renovation

To keep the patients environment in good condition, most of all the facilities need to be renovated except for the new eye ward, new eye theatre, PMIU building, which have some damages such as water leakage from the roof, damage of ceiling, doors, windows, floors, and gutters etc.

## (5) Sanitary

Some plumbing problems in water closets such as water leakage and low water pressure should be renovated, and also small water tank should be installed on the ceiling to improve the water pressure. However, in the case of proposed new wards, water closet should be separated from wards to keep the ward in clean. Considering sustainability, the pit latrine or another system should be studied.

# (6) Water Supply

To meet the demand of 220,000 litres/day, additional water tank is needed. A rainwater harvesting system should be installed to reduce their water consumption.

#### b. Nyamira DH

# (1) Renovation of Roofing

Measures should be taken to improve the rain water leakage to reduce the damage to the building. To put pitched roof above the existing building is one of the options.

# (2) Water Supply

The amount of water supply is short to the demand, because the water supply cannot catch up with the rapid increase of population in the Nyamira town. Plumbing work should be undertaken to repair water leakage.

#### c. Kisii DH

#### (1) Layout Plan

As a result of the repeated expansion, the hospital has some serious confusion in its facility layout plan. In order to absorb the more patients and improve the quality of their health services, this hospital needs a functional rearrangement of the facility layout in consideration of the following:

- Rearrangement of zoning, based on the logical functional relationship to ease the congestion in the hospital and make the control of visitors easily;
- Control of visitor's flow by the construction of perimeter fence, limitation of visitors' entrance and approach, setting a regulation of visiting hours, etc;
- Building pitch with sufficient ventilation; and
- Rearrangement of the complicated piping line for water supply and wiring for electricity.

#### (2) Service Capacity

To handle more than 600 outpatients daily, the OPD needs to be expanded. The current BOR of each ward varies commonly over 100% on the average. It is clear that the hospital's space is not enough to accommodate the large number of patients. The number of nurses in wards is 163 persons, and the ratio of beds to nurse is 1.69 beds/n. In consideration of this staff capacity, around 350 beds (2.22 beds/nurse) assumed to be available to be handled by the existing staff, though it is desirable that hospital has enough bed for the patients in future.

#### (3) Building Renovation

Most of all the facilities should be totally renovated. Seriously damaged buildings such as OPD and Ward 1 need to be reconstructed.

#### (3) Sanitary Facilities

The Kisii DH suffers from some plumbing problems that should be renovated. When new ward(s) are constructed, such sanitary conditions should be improved.

#### (4) Water Supply

To meet the demand of 180,000 litres/day, an additional water tank is required. A rainwater harvesting system should be installed to supplement the water supply.

# d. Equipment

Replacement of damaged medical equipment and addition of necessary medical equipment are necessary to strengthen the referral function and diagnostic capability for curative services as a district hospital. The equipment for Essential Health Services or Basic Health Service should be also included since the hospitals have got the function to provide those services to urban population.

# 18.3.2 Improvement of Management and Accounting System

# a. Re-establishment of organizational roles for the District Hospitals

The organisational role of newly created HMBs should be realised and co-ordinated with the other district managing and implementation bodies such as DHMTs and DHMBs. The functional role of the district hospital as a referral centre should be also discussed for the improvement of the linkage with rural health facilities.

#### b. Improvement of hospital management and accounting

The capacity building of management in the district hospital is urgent matter to maintain and improve the quality of curative services. It is necessary for all senior staff, in particular, the member of the Hospital Management Teams to have training a course such as the quality improvement and personal management skill.

The creation of hospital service improvement section will be encouraged to initiate the institutional change on the performance of quality care. This will be implementation section of quality control and patient service.

The most significant financial source for maintenance is the facility improvement fund (FIF) coming from 75 % of the collected money through the cost-sharing system. In reality, the management of the FIF needs to be further rationalised at the district level, upgrading the collection system as well as securing the fund against leakage. The fund collection system should be improved by 1) introduction of a "Cash Registering

System" and 2) integration of the System together with Health and Management Information System.

The HMBs should be re-organised in such a way that a quick and timely decisionmaking can be made for management of the hospital including the hospital budgetary and personnel arrangement.

# 18.3.3 Establishment of a New Maintenance System for DHs

In order to make Hospital Maintenance Unit (HMU) more functional in performing preventive maintenance activities as well as daily mandates, a new maintenance system, involving users of medical equipment and facilities, is necessary. The new maintenance system involves:

- to define work procedures for maintenance;
- to formulate an Annual Maintenance Plan;
- to involve each department of DH for maintenance activities; and
- to define documents to be filed.

Under the new maintenance system, all departments should assume their own responsibilities for daily and preventive maintenance. User departments, such as Clinical Medicine, Out-patient, In-patient, X-ray, Laboratory, Bye, Dental, Physiotherapy, Pharmacy, etc. should have the responsibility for making the specifications of equipment and facilities. On the other hand, the Administration Department should have the responsibility for registration of all the equipment or facilities.

# 18.4 MAJOR ACTIVITIES

The major activities that have to be done for the project are as follows:

- (1) Training for increasing capacity of Hospital Management:
- (2) Strengthening the hospital accounting and recording systems;
- (3) Establishing client service improvement section and linkage with H/C, Dispensaries, private practitioners that are part of the referral system;
- (4) Comprehensive rehabilitation of buildings and related facilities of Kericho and Kisii DH;
- (5) Minor rehabilitation of the building and facilities of Nyamira DH;
- (6) Replacement and addition of Medical Equipment in Kericho, Longisa, Nyamira and Kisii DHs; and
- (7) Strengthening the Maintenance Department and Establishment of preventive maintenance system in DHs.

The table below indicates the necessary activities for the individual district hospital.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Kericho DH	XXX	Xxx	XXX	XXX		XXX	xxx
Longisa DH (Bomet)	XXX	Xxx	XXX	XXX	<u> </u>	XXX	xxx
Nyamira DH	XX	Xx	XXX		xxx	XXX	XXX
Kisii DH	xxx	Xxx	XXX	XXX		XXX	XXX

XXXX

Explicit Requirement

xx: Implicit Requirement

# 18.5 PROJECT OUTPUTS/INPUTS

With reference to section 18.4, Activity (1) will require technical assistance and training on management and quality improvement. Activity (2) will need the development of a basic design and system for information system together with supply of computer and softwares. Training will also be included.

Activity (7) needs technical assistance for the planning and implementation of the component.

When it comes to Activities (4), (5), and (6), the following rehabilitation of facilities and provision of equipment should be included as input for this proposed project.

# 18.5.1 Project Input

#### Kericho DH

# a. Zoning for the efficient facility arrangement

- Consolidation and expansion of Administration department.
- Position of OPD section and Hospital Administration should be inter-changed with each other.
- Laboratory and X-ray should be located nearby, and where easy access from OPD and Surgical department, and also IPD.
- In-patients service should be gathered.

# b. Renovation or reconstruction of buildings

With the exception of some buildings, most of the buildings require total renovation, especially for the roofing, fascia boards, rain water gutters, floor finishes, walls, (internal and external) wall finishes.

#### c. New departments

The following facilities are recommended for construction -

- Casualty: As mentioned above, to meet the demand for casualty service, facility for casualty department should be constructed.
- Amenity ward: From financial point of view, an amenity ward is supposed to increase the hospital revenue.
- O Surgical ward: To separate the surgical patients from the medical ones, new surgical wards should be constructed: one for males and the other for females.

# d. Expansion:

- OPD: The space for OPD, especially for MCH should be expanded to accommodate more patients.
- IPD: with a target of reduction in BOR from the existing 106% to 80% by increasing the bed capacity, the wards which need to increase the capacity are Ward 3 and Ward 2 as follows:
  - Ward 3/Isolation ward: The annual average BOR was 165%. The number of beds should be increased by at least up to 20 to reduce the BOR to less than 100%.
  - Ward 2/Paediatric ward: DH has a plan to move them to the building that is not being used. This movement needs to increase, the number of beds from 30 to 40-45 beds. (BOR will be around 100%)
  - Ward 5/Female ward and Ward 6/Male ward: In order to prevent in hospital
    acquired infections, the medical patients should be separated from the others
    by increasing the beds up to 45 in both the wards.

Increasing the total number of beds by 40-45 beds is expected reduce the average BOR to around 100%.

a Administration Building: The administration department, should be consolidated.

# e. Renovation of water supply system

To reduce water consumption and to reserve water enough is case of water supply cutoff, rainwater should be stored from the roofs.

#### f. Renovation of sanitary facilities:

The existing water closets, which are not working, should be renovated.

#### <u>Kisii DH</u>

# a. Rearrangement of functional organisation:

- Consolidation and expansion of Laboratory
- Outpatient services including dental and special treatment, should be located near the entrance.
- In-patients department, some wards should be gathered.

Laboratory and Pharmacy should move nearby X-ray.

#### h. Repovation or Re-construction of DHs

With the exception of some buildings, most of the buildings require total renovation, especially for the roofing, fascia boards, walls, (internal and external) wall finishes, and plumbing works.

# c. Expansion

a OPD

OPD facility should be expanded to accommodate additional 6% patients.

#### o IPD

For reduction of BOR, around 80 beds should be added. The wards, which need to increase the capacity, are Ward 6, Ward 1, and Ward5. And also the capacity of Ward2 and Ward3 is recommended to increase.

- Ward 6/Female Medical Ward and Ward5/Male Medical Ward: The average annual BOR in a year was 329% at Ward 6 and 233% at Ward 5 in 1996. It means three or two patients usually have to share one bed. If around 50 beds should be added for both the wards in total, the BOR of medical wards combined will be reduced to less than 150%.
- Ward 1/ Gynaecological ward: The BOR of Ward 1 is so high, because this ward accommodates medical patients in the Malaria season. Ward 1 was planned to be demolished when the new buildings would be completed in the World Bank Project. However, even now, concrete relocation site gynaecological patients will move to, have not been decided yet. When the new building is built, the bed capacity of this section is recommended to be expanded.

# d. Water supply system

To reduce the piped water consumption and to store enough water in case of the water supply cut-off, rainwater should be stored from the roofs.

#### e. Sanitary facilities

The existing water closets, which are not working, should be renovated.

#### Nyamira <u>DH</u>

- Renovation of water proof roofs: pitched roofs should be put up immediately
- Plumbing works should be repaired
- Water supply system: To meet the demand, rainwater should be used for cleaning, and also possibility to dig a well should be examined.

# Medical Equipment In Kericho, Longisa, Nyamira and Kisii DHs

The summary of replacement of damaged medical equipment and additional medical equipment for Kericho DH, Longisa DH. Nyamira DH and Kisii DH are shown below. In case of Longisa DH (Bomet), an equipment specialist should do further assessment; nevertheless, the list of requested equipment is available. The projection for the future demand and the deployment of staff are also required before implementation.

	Hospital section where the equipment is required to be placed or replaced	Number of Items (include a set)
Kericho DH	Male Ward, Maternity Ward, Female Ward, Delivery Room, Children Ward, Physiotherapy, Operating Theatre, TB Ward, Eye Clinic, Dental Clinic, Laboratory, X-ray Room, Eye Ward, Nursery, Occupational Therapy, MCH Clinic, Mortuary, Laundry and Maintenance Room.	164 items
Nyamira DH	Maternity Ward, Female aord, Physiotherapy, Main theatre, Laboratory, X-ray Room, Occupational Therapy, Pharmacy, Amenity Ward, Maintenance Room	74 items
Kisii DH	Laboratory, MCH clinic, Outpatient Clinic, ENT clinic, Eye Clinic, Physiotherapy, X-ray Room, Maternity Ward, Dental, Entomology Laboratory, Theatre for Vasectomy Service, Theatre, Ophthalmology, Central Sterile Supply Department, Maintenance Room	122 items
Longisa (Bomet)	Ward, Delivery, Physiotherapy, Occupational therapy, Operating theatre, Eye clinic, Dental, Laboratory, Pharmacy, X-ray room Causality, Mortuary, Laundry, Maintenance, Kitchen	135 items*

# 18.5.2 Donor Inputs and Arrangement

To implement this project, the following arrangements will be necessary:

- Construction of new buildings in Kisii DH by Population IV Project supported by World Bank should be finished.
- □ Kenya Government (MOH) should secure the recurrent budget for the project and the functional role of HMBs for the hospital management.
- Donors should provide a) technical assistance in terms of Hospital Management, b) rehabilitation and expansion of hospital facility and provision of equipment for DHs, and c) technical assistance for strengthening the preventive maintenance system for equipment.

#### 18.5.3 Expected Benefits/Output

☐ Health service environment improved.

- The Facility rehabilitated and necessary equipment for the Hospital Service provided.
- The quality of curative service and hospital care provided in the hospitals improved.
- Hospital management including financing improved.
- Hospital maintenance revitalised.

#### 18.5.4 Verifiable Indicator

- No. of appropriate referral cases
- Availability of necessary diagnostic test/ treatment
- Revenue increased
- □ Maintenance records / Operation rate of equipment
- Reduction of Bed Occupancy Rate

#### 18.5.5 Estimated Cost

US\$ 14.35 million (Only facility and equipment)

# 18.6 OTHER PROJECT MANAGEMENT ISSUES

# Project Linkages / Other Sector Linkage

Rural Health System Development Programme

District Health Service Education Programme

#### Relevant Agencies to be Co-ordinated

USAID: Hospital Management Programme / AFIYA Project

PMIU (DANIDA): Future Project for Maintenance (Preventive Maintenance Supporting Unit)

GTZ: CBD programme in Nyamira

WB: Sexual Transmitted Infection Programme

# Important Assumptions/Conditions for the Project

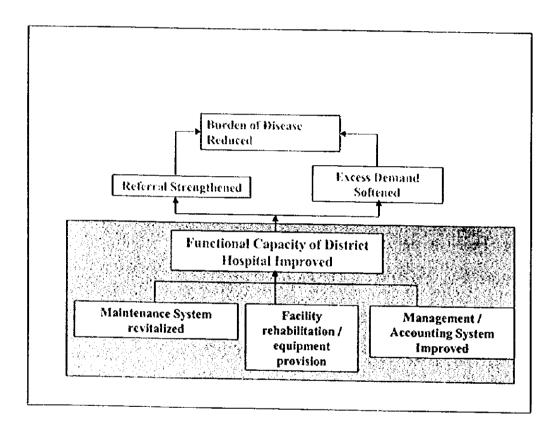
MOH/ PMO continue to support the project

Key players within the project are well guided to the common goal Community cooperage to the improved quality of services

# 18.7 PROJECT IMAGE

The goal of hospital rehabilitation project is to improve the capacity of DH so that they are functional through re-vitalization of maintenance system, rehabilitation of facilities, provision of necessary equipment and improvement of management.

As a result of project outputs, the excess demand of hospital will be softened and referral function will be straightened, then ultimately there will be impact on reducing the burden of diseases people who suffer from.



# Priority Program 2: DISTRICT HOSPITAL REHABILITATION PROGRAM

1. Project No.	2. Project Title						
P-2	District Hospital Rehabilitation Program						
3. Project Location 4. Targe		4. Target Beneficiarles All residents in the catchment area of		5. Project Duration 3 years			
Districts	Kericho, Longisa (Bomet), Nyamir Kisii District Hospitals.						
6. Implementing Agency / Body			1	. Project Leve		Project Priority	
District Health Management Board(DHM8) and District Health Management Team(DHMT)				asic	Hiç	<b>ያ</b> ስ	
(1) To improve quality	rral cases to the total of essential curative	out-patient will be increased 3 time services and extend critical diagnos or RHFs in the catchment area	s higher than tic and treatn	the current lev nent capacity o	el through: Il District Hos	spitals.	
<ul> <li>The capacity of Kis</li> <li>Comprehensive related and Kisii DH.</li> </ul>	habilitation of the bui	H is not enough to meet the demand dings, related facilities and replacer ken equipment because of few Previ	nent of medic				
11. Expected Benefit	ls / Outputs		12. Verifiable Indicators				
Health service environment improved     Facility rehabilitated and necessary equipment provided     Quality of curative services and hospital care improved     Hospital management including financing improved     Maintenance system re-vitalized			<ul> <li>No. of appropriate referral cases</li> <li>Availability of necessary diagnostic test/ treatment</li> <li>Revenue increased</li> <li>Maintenance Records / Operation rate of equipment.</li> </ul>				
<ul> <li>Construction of Ne 14. Project Linkages</li> </ul>	ent Board for each to w buildings in Kisii C o / Other Sector Lini ment / District Health	OH will be established and take over OH by Population (V project (WB) sh	ould be finishe 15. Relevan W8 (Popula	ed. It Agencies to tion IV Project)	be Coordin		
16. Major / Key Activ	vities		17. Major Input 18. Est			18. Est'd Cost	
			Personnel	Materials	Const- ruction		
Increase capacity	Х						
Strengthen hospit	al accounting and re-	cording	Х			US\$ 0.1 M.	
☐ Improve curative s	service and hospital :	service	Х	1			
□ Establish client se H/C, Dispensaries	Х						
<ul> <li>Comprehensive rehabilitation of buildings and related facilities of Kericho and Kisii DHs.</li> </ul>				X	х	US \$ 9.03 M.	
<ul> <li>Minor rehabilitation of the building and facilities of Longisa, Nyamira DH.</li> </ul>				X	X	US\$ 1.67 M.	
Replacement and addition of Medical Equipment in Kericho, Nyamira and Kisii DHs.				X		US\$ 4.21 M.	
<ul> <li>Strengthen the Management of the strength of the</li></ul>	X	X	<u> </u>	1100 41 05 11			
19. Estimated Total Cost 20. Necessary External Inputs / Assistance / Arrangement				<del></del>		US\$ 14.35 M.	
	•		<del></del>	T	<del></del>		
Technical assistance	•		X	<b></b>	<b></b>	<del></del>	
		by FIF and MOH Budget	X	X	x	<u> </u>	
Rehabilitation and Expansion of facilities and provision of equipment for DH				X	- X	<del> </del>	
Technical assistance to strengthen the preventive maintenance system for equipment							

equipment
Only facility and equipment

# **Chapter 19**

Concept Paper:
Rural Health System
Development Program

# 19. RURAL HEALTH SYSTEM DEVELOPMENT PROGRAM

# 19.1 ESSENTIAL INFORMATION

# **Project Objectives**

To increase the quality of essential health services in Kericho, Bomet, Nyamira, Kisii and Gucha through the strengthening of the rural health system.

As a result of proposed project implementation, there will be 30% increase of quality basic health service in the entire region.

# **Project Location**

Kericho, Bomet, Kisii, Nyamira and Gucha

#### **Target Beneficiaries**

The proposed project will potentially bring the benefit of essential health service to all residents in the catchment area of the priority health centres.

#### **Project Duration**

5 years

#### Implementing Agency/Body

Project Management: District Health Management Teams
Daily Project Monitoring: Health Centre Management Teams

#### 19.2 PROJECT RATIONALE

Epidemiological data reveals that communicable diseases account for the majority of the morbidity (55 - 70 % of outpatients) and child mortality (55 - 80%). The diseases of most importance are malaria, ARI, immunizable diseases, tuberculosis and AIDS.

Most of these diseases could be prevented or diagnosed and treated in the rural health facilities if they were properly staffed and supported with essential supplies. However,

currently, the rural health facilities do not meet the community's demands and needs. Many patients, therefore, go to private facilities, traditional healers or buy drugs in shops. Others make their way to towns and congest district hospitals.

Among the 300 health facilities in the Study Area, the health centres are likely to be the most cost-effective category of facility. However, the designation "health centre" given to many of these facilities does not follow the MOH guidelines. Many lack the staff (e.g. CO, RCN, etc), and the facilities and equipment (e.g. delivery room, laboratory, etc) essential for a functional health centre. The preventive/promotive health activities are seldom undertaken or recorded. As a result, the quality of services provided at health centres are low and district hospitals are very crowded with the visitors who can be dealt with at lower-level facilities.

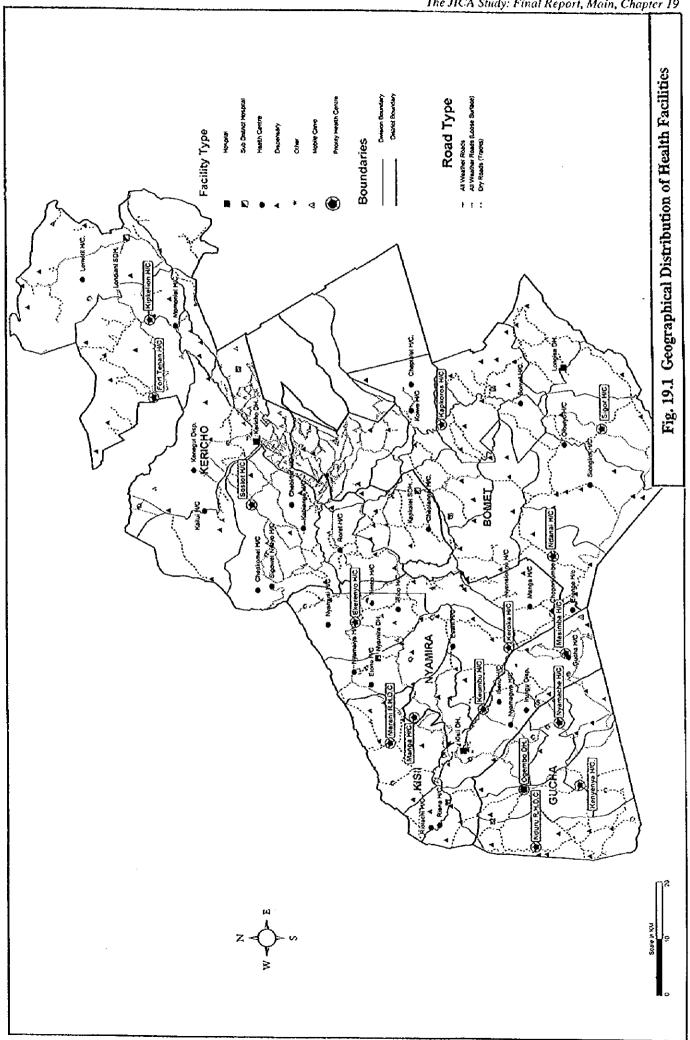
In addition, some organisational mechanisms are not in place. There is a need to improve coordination of vertical programmes, supervise and monitor activities being done at health facilities, dialogue with the facility improvement committees, and strengthen the logistics and referral systems.

Despite the importance of information and communication in maintaining rural health system, the information is not available for planning and the means of communication and transportation is very limited at almost all health facilities. For example, reporting rate of outpatient morbidity is only 7.5% in Nyamira and 48.5% in Bomet, the best among the Study districts. Communication between DMO and Rural Health Facilities, in many cases, depends on availability of people who would visit the facilities.

To improve the rural health services with the limited resources available, it was decided to concentrate on 16 (so-designated) health centres. These were selected on the basis of geographical service catchment area, existing facility function, role in the locality, level of community involvement, etc. The process of identification was based not only on the objective criteria but it also involved discussion with local counterparts and the MOII.

The distribution of the 16 Priority Health Centres are shown in Fig. 19.1.

As described in the Health Sector Reform, the responsibility and authority for the day-to-day operations of the health care delivery systems and services will be under the responsibility of the district. Making functional the district heath services delivery system is one of the strategies in the Master Plan together with rehabilitation of existing health facilities and equipment and institutionalising management and quality assurance.



# 19.3 PROJECT COMPONENTS

# 19.3.1 Standardisation of Rural Health Services

Type and quality of health services at RHFs should be standardised in order to have the people recognised the differences in services between health centres and dispensaries. The existing vertical programs should be integrated since health centres are a complete unit for facility-based primary health care or so-called essential health services. Facility-based preventive/promotive activities should be particularly promoted for standardisation.

It is necessary to meet the satisfaction of patients as well as health providers in terms of quality of services provided. Quality control on laboratory tests, improvement of staff morals and proper practice of diagnostic protocols are all the necessary inputs but not in place in the Study area. A simple but objective quality control program should be introduced into health centres.

# 19.3.2 Rehabilitation of Priority Health Centres

The Study Team assessed the physical conditions of all the 16 Priority Health Centres and elaborated the rehabilitation and/or expansion plans of each facility, employing the following criteria:

- Maximum use of existing/vested buildings and facilities;
- Rational grading of rehabilitation based on levels of the health services to be provided and the number of patients;
- Functional flow lines and zoning plans, taking into consideration the future expansion.

# a. Classification of Priority Health Centers for Rehabilitation

A classification scheme in terms of up-grading levels of Priority Health Centres is set forth, as shown in Table 19.1. Two types of facility components are proposed according to the level of service required in this stage. In future, all H/Cs are expected to be up-graded to Grade 2.

According to the condition of existing facilities, 16 P-H/Cs are classified into 5 categories. The category of H/Cs in the lowest line stands for less rehabilitation work, compared to H/Cs in the highest line.

Table 19.2 shows facility components to be improved corresponding to Grade 1 and 2, in comparison with the health centre standards by MOH and those by Ministry of Public Works.

The proposed facility components be planned, based on a design principle, that is, Priority Health Centres should have:

- Delivery Room and Maternity Ward including sterilisation room and nursery room;
- Laboratory;
- At least 6 beds for in-patients service for observation bases with meal provision service facilities;
- · Several number of staff housing units;
- Waiting area and space for health education; and
- Water and electricity supply systems.

The facility to be renovated should be planned to minimise the maintenance work.

**Table 19.1 Classification of Priority Health Centres** 

Existing condition	Grade 1	Grade 2		
Only OPD				
No Delivery/Maternity	Kipkelion H/C	Fort Teman H'C		
No Ward for IPD				
	, '	Kapkoros H/C		
OPD and Delivery/Maternity		Ekerenyo H/C		
No ward for IPD		Nyamache H/C		
OPD and Delivery/Maternity	Ndanai H/C	Sociot H/C		
Only one ward for IPD	Kenyenya H/C	Keroka H'C		
Full facility, but very old, and total		Marani II/C		
rehabilitation required		Nduru H'C		
		Masimba HC (Water supply)		
Full facilities, but small obstacle		Sigor H/C (Lack of beds)		
hamper full functioning.	Manga HC Kitchen/laundry)	Keumbu H/C (In the process of renovation)		
		Ogembo H/C* (Shortage of space)		

Notes: \* SDH level service is required

Table 19.2 Proposed Facilit	Components of PRIORITY	HEALTH CENTRE
-----------------------------	------------------------	---------------

		MO	CH .	F	W	PRIORITY HEALTH CENTRE	
Department	Components	Type 1	Type 2	Туре 1	Туре 2	Grade 1	Grade 2
OPD/MCH	Consultation Rm.		A SUBJECT OF SUBJECT O	5 rooms	5 rooms		1 V 1 V
	Treatment/Injection 8m.			2 rooms	2 rooms		
	Laboratory	7.0	40000	1 room	1 room	. Give	
	Minor Surgery Rm.			noon f	1 room		\$ <b>0</b> 0,770
	Pharmacy	Las Mark A. 1996		1 room	l room		
	MCH		<b>X</b> AXIONEXAM   	THE WALLS AND A STATE OF THE ST	er en	. J-93	War.
	FP					48.43	
Maternity	Delivery Rm. inc. sterilisation Rm.						
	Maternity ward	8 beds			6 becs		
	Kitchen / Laundry	ļ	Marian		S. Alexandria	3.64	A MARKET A
IPD	Female ward				2 beds		#8 beds
	Male ward	6-12	12-24		2 bads. J	6 beds	10 beds
	Paediatric Ward	beds	beds		13 para 1		th beds
	Isolation Ward			1			2 beds
Staff house		<b>新沙李</b> ·秦		1.4	7-8-24-17	14 多事項	C 100 T.L.

Notes: Explicit requirement

Implicit requirement

#### b. Infrastructure and Utilities

Most of Priority Health Centres have serious problems about water, electricity and communication means. These problems constrain Priority Health Centres to poorly function.

Water supply: every Priority Health Centre should have any water supply system by either a rain water harvesting system from the roof, well or piped supply system.

Sanitary Facilities: Most of water closets are poor in operational. Considering the sustainability, pit latrine type will be a better option. Even in cases where there are existing water closets, they need to be renovated to be supplied with small water tanks from the ceiling..

Sewage System: Septic tank should be installed.

Electricity: All Priority Health Centres are expected to be supplied electricity by extending wiring from the nearest point, or by generator. Priority Health Centres with Grade-2 should get electricity to keep some reagents for the pregnancy test.

Communication: A telephone line is desired to be installed by extending the line from the nearest point. Instead, it should be studied to establish a communication system among the DHs and Priority Health Centres with Radio Communication system.

<b>Table 19.2</b>	<b>Proposed Facility</b>	· Components of PRIORI'I	FY HEALTH CENTRE

		MC	OH	Р	W	PRIORITY HEALTH CENTRE	
Department	Components	lype 1	Тура 2	Туре 1	Туре 2	Grade 1	Grade 2
OPD.MCH	Consultation Rm.			5 rooms	5 rooms		
	Treatment Injection Rm.			2 rooms	S tooms		
	Laboratory			1 room	1 room	-	
	Mmor Surgery Rm.		harmana and read of the	1 room	1 room	4-7-3 -3774-4-747	
	Pharmacy			1 room	1 room		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	MCH						
	Eb.	i				9 4 3c3	
Maternity	Delivery Rm. inc. sterilisation Rm.						
	Maternity ward	8 beds	become a second		6 beds	6 beds	6 beds
	Kitchen / Laundry				\$1500 Per 100	<u>. 3953, 35</u>	V2 100 5
IPO	Female ward				2 beds	İ	6 beds
	Male ward	6-12	12-24		2 beds	6 beds	6 beds
	Paediatric Ward Isolation Ward	beds	beds		2 beds	5 5555	6 beds 2 beds
Staff house							

Notes: 3		:	Explicit requirement			:	Implicit requirement
----------	--	---	----------------------	--	--	---	----------------------

#### b. Infrastructure and Utilities

Most of Priority Health Centres have serious problems about water, electricity and communication means. These problems constrain Priority Health Centres to poorly function.

Water supply: every Priority Health Centre should have any water supply system by either a rain water harvesting system from the roof, well or piped supply system.

Sanitary Facilities: Most of water closets are poor in operational. Considering the sustainability, pit latrine type will be a better option. Even in cases where there are existing water closets, they need to be renovated to be supplied with small water tanks from the ceiling..

Sewage System: Septic tank should be installed.

Electricity: All Priority Health Centres are expected to be supplied electricity by extending wiring from the nearest point, or by generator. Priority Health Centres with Grade-2 should get electricity to keep some reagents for the pregnancy test.

Communication: A telephone line is desired to be installed by extending the line from the nearest point. Instead, it should be studied to establish a communication system among the DHs and Priority Health Centres with Radio Communication system.

Fire Prevention Measures: Priority Health Centres which have wards need fire prevention measures.

Waste Disposal: Careful attentions should be given to waste disposal, particularly medical wastes. A centralized incineration system of medical waste is recommendable.

Access Roads: Transportation is one of the most important factors to get health centres function. As a result of survey, it is clear that the condition of roads which lead to Priority Health Centres are strongly related to the extend of the service area. Therefore, roads approaching Priority Health Centres are expected to be a tarmac road or at least gravel road.

#### c. Equipment

Up grading of equipment should be considered based on the following:

- A binocular microscope should be supplied to the all Priority Health Centres to support malaria diagnosis.
- Equipment kits are developed for outpatient services, maternity services, laboratory, ward services and electricity for Priority Health Centres. Contents of each kit are as shown in Table 18.3.
- Ogembo HC, which is located near by a national trunk road, has become subdistrict hospital where many patients are taken to as a result of traffic accidents.
   Ogembo HC should be equipped as a Sub DH.

**Table 19.3 Equipment Kits for Priority Health Centres** 

Kit 1: Outpatient Services		Kit 3: Malaria Screening	
Stethoscope	2	Binocular microscope	1
Thermometer	4		
Sphygmomanometer	2	Kit 4: Laboratory Services	
Auriscope	1	Haemoglobinometer	1
Baby scale	1	(Sahli method)	
Adult scale	1	ESR stand	1
Minor surgery set	ı	Centrifuge	1
Dressing/treatment trolley	1	Refrigerator	1
Reflex hammer	1	Kit 5: For Ward	
Torch	1	Foot suction unit	1
Diagnostic set	1	Sphygmomanometer	1
Kit 2: Maternity Services		Stethoscope	1
Light source	1	Thermometer	1
Baby scale	1	Drug trolley	1
Adult scale	1	Infusion set	2
Sphygmomanometer	1	Resuscitation bag	1
Fetoscope	1	Patient modesty screen	1
Delivery bed	1	Bed	6
Vaginal examination set	1		
Neonatal mouth sucker	l l	Kit 6: Electricity	
Delivery set	1	Generator	1
Episiotomy set	1		
Vaginal specula, forceps	1		
Resuscitation bag	1		

#### 19.3.3 Enhancement of Management Systems

Priority Health Centres should be improved so as to strengthen the planned functions as the complete units of essential rural health care centres in terms of:

#### a. Strengthening of the Referral System

The following measures should, in particular, be undertaken for Priority Health Centres to move present constraints in the referral system:

Strengthening the capacity of laboratories in Priority Health Centres;

- Improving transportation and communication;
- Establishing economic incentives for referral; and
- Educating the efficiency of the referral system.

#### b. Re-organization of Logistics

The comprehensive logistics improvement program should be implemented through:

- Provision of training on appropriate use of drugs;
- Establishing the supply system which corresponds to the demand at the district level or a shift from the "push" system to the "pull" system; and
- Administrative linkages between drug supply policies and statistics/records in the health information system (HIS) at the district level.

#### c. Establishment of Communication Channels

The communication means among DHMTs/DHMBs, hospitals and RHFs should be strengthened in terms of technical support, supervision, monitoring, sharing of information, data collection and drugs/material distribution. Priority Health Centres are expected to the information centres to joint the communication network. In this sense, the followings are necessary to be carried out:

- Managerial capacity assessment, analysis, planning, implementation, and monitoring on existing health programs and services:
- Designing and implementation of a simple district financing management system that facilitates to increase fee collections;
- Development of District Health Information Management System with database regarding outpatient services, inpatient services, workload services, personnel, financing, logistics of drugs and equipment, health facilities, etc.;
- Development of a district supervision and monitoring list for RHFs including a daily operation schedule of transportation; and
- Building a radio communication system.

#### d. Managerial Capacity Building of Priority Health Centers

Capacity building of health staff at Priority Health Centres is of vital intervention. This should materialise through the proposed District Health Service Education Program. The following should be started at selected Priority Health Centres and extended to the other facilities:

- Development of a model for facility-based preventive program focusing on essential elements of primary health care;
- Development of referral protocol to sending a patient to district hospitals and receiving a patient from dispensaries;
- Formulation of outreach programs for those who do not have access to health care services jointly with the private and/or NGOs activities;
- Provision of transportation such as motorcycle (s) for the above purpose.

#### 19.3.4 Revitalization of Maintenance System

Existing preventive maintenance system for rural health facilities has been strengthened by the PMIU project. However, there are some damages still left due to lack of fund, difficulty in getting support from MOPW, and limited skill of PHOs and PHTs.

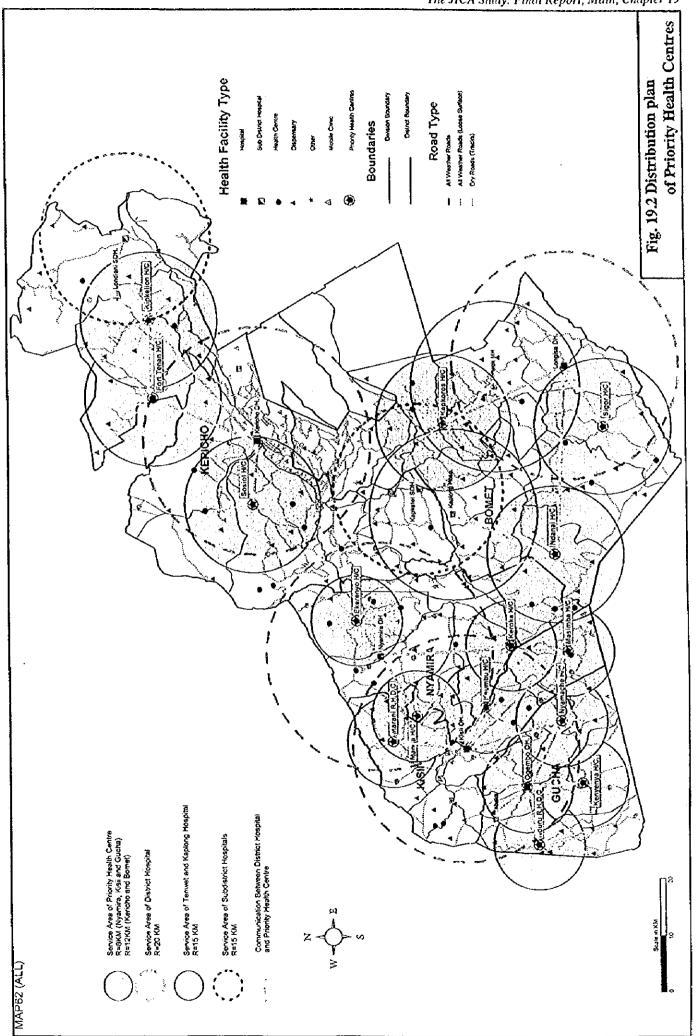
In order to link their activities, it is recommended to organise a maintenance team with the involvement of PHO and PHTs for training on plumbing work, electrical work, and minor equipment maintenance. A system of keeping spare parts in each district should also be established to repair or replace damages quickly.

The PMIU project, however, does not take care of medical equipment. Maintenance system for medical equipment in HCs should be established.

### 19.3.5 Establishment of A Network of Health Facilities and Health Personnel

Improvement of health status of people is achieved by well-co-ordinate efforts of all health-related resources. This should lead to well-balanced distribution of the resources to be allocated into areas where most people really need the services.

The role of health centres are not only to serve the people in its catchment area, but also to be the joints of a district referral network intermediately connecting with dispensaries and district hospitals. In order to establish a more functional referral network, the service catchment areas of Priority Health Centres should be developed. Because of higher population density in Nyamira, Kisii and Bomet, the service catchment areas are relatively smaller but still hold larger population, compared to those of Kericho and Bomet, as shown in Figure 19.2. The rest of the areas are covered by sub-district and/or district hospitals.



#### 19.4 MAJOR ACTIVITIES

#### 19.4.1 Strengthening Rural Health Management-(1)<sup>1</sup>

- Managerial capacity building for the DHMTs/DHMBs on support, supervision and monitoring
- a Training for planning, management, supervision and monitoring
- Development of the district health information system
- Development of the district financing management system
- Development of management manual and supervision and monitoring list
- Develop integrated supervision, monitoring and communication channel to the RHFs

#### 19.4.2 Establishment of facility-based Management-(2)

- Managerial capacity building for the Priority Health Centres
- Develop and demonstrate the use of epidemiological data and workload at priority H/Cs
- □ Training of personal skill development and team work
- Training on diagnostic capability and treatment for the services provided at the P-H/Cs
- Establish capacity for HMTs to monitor the activities in the proposed project
- Guide the Health Centre Facility Improvement Committees for qualitative service
- ☐ Guide priority H/Cs committees for the project

# 19.4.3 Establishment of Better Quality of Services through Rehabilitation of Facilities and Provision of Equipment together with Maintenance System-(3)

- Rehabilitation of the facilities with the provision of equipment
- Rehabilitation work and distribution of equipment
- Establishment of maintenance system

#### 19.4.4 Establishment of Quality Control and Service Network-(4)

- Establishment of quality control for the P-H/Cs
- Development of referral flow and involvement of relevant the facilities

## 19.4.5 Development a Model for Facility-Based Preventive Programme(5)

Development a model for facility based preventive programme

<sup>&</sup>lt;sup>1</sup> For explanation about the number system, refer to section 19.5.1.

#### 19.5 PROJECT OUTPUTS/INPUTS

#### 19.5.1 Project Inputs

The number in parenthesis for each type of activity (section 19.4) coincides with the type of project inputs that include the following:

- (1) Technical Assistance with external resource (donors) or integrated in the existing MOH programme
- (2) Through the Proposed District Health Service Education Programme or other external training programme
- (3) Grant Aid: possibly JICA, which consists of major and minor rehabilitation of health centres, expansion of essential room such as laboratory, installation of water supply system and provision of equipment for Maternal and child health and laboratory. Provision of vehicles / motorbikes for the component 1 could be included.
- (4) The district will develop the component.
- (5) Technical assistance with external resource: Possibly Japan Oversees Cooperation Volunteers (JOCV).

#### 19.5.2 Donor Inputs and Arrangement

The roles and procedures among DHMTs, DHMBs, and rural health facilities are neither clear-cut nor shared among these important organisational actors. Hospital Management Board (HMB) is now in consideration to be fully responsible for the running of the district hospitals. In this context, there is a need to clarify the roles and responsibilities for the DHMB, HMB, and DHMTs.

MOH/ PMO continue to support the project since the proposed project is within the framework of Health Sector Reform.

Key players within the proposed project should be well guided to the common goal. As the health centre committees are active to some extent, the intervention should be supportive to their activities.

#### 19.5.3 Expected Benefits / Outputs

- Management capacity at priority H/Cs institutionalised
- Epidemiological and workload data utilised
- Facility and equipment improved
- Quality of services improved
- Type of services extended including facility based preventive activities

#### 19.5.4 Verifiable Indicators

- Management schedules and monitoring lists available and used
- Bpidemiological and workload data applied to logistics programme, and annual planning

- O Number of attendance / referral / FIF increased
- Improved coverage area of priority H/Cs
- Contact between priority H/Cs and dispensaries increased
- Number of laboratory tests increased

#### 19.5.5 Estimated Cost

US\$ 7.33 million (Only facility and equipment)

#### 19.6 OTHER PROJECT MANAGEMENT ISSUES

#### Project Linkages / Other Sector Linkage

District Health Service Education Programme

#### Relevant Agencies to be Co-ordinated

PMIU (DANIDA): Future Project for Maintenance (Preventive Maintenance

Supporting Unit)

GTZ: CBD programme in Nyamira

WB: Sexual Transmitted Infection Programme

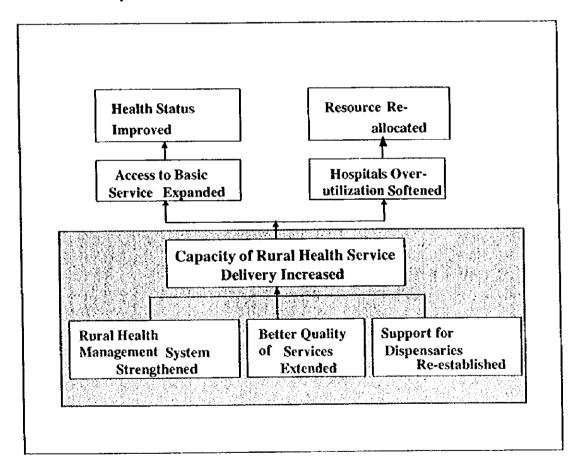
#### Important Assumptions/Conditions for the Project

MOH/ PMO continue to support the project Key players within the project are well guided to the common goal Community cooperage to the improved quality of services

#### 19.7 PROJECT IMAGE

The goal of rural health system improvement project is to increase the capacity of rural health service delivery through prioritizing 16 health centers that could serve as links between management and the referral networks.

When rural health management system is strengthened, better quality of services is extended, and support for dispensaries is re-established, it is assumed that the capacity of rural health service will be increased at the end of the project. As a result of the proposed project implementation, there will be impact that access to basic health services will be expanded and over-utilization of the district hospitals will be softened.



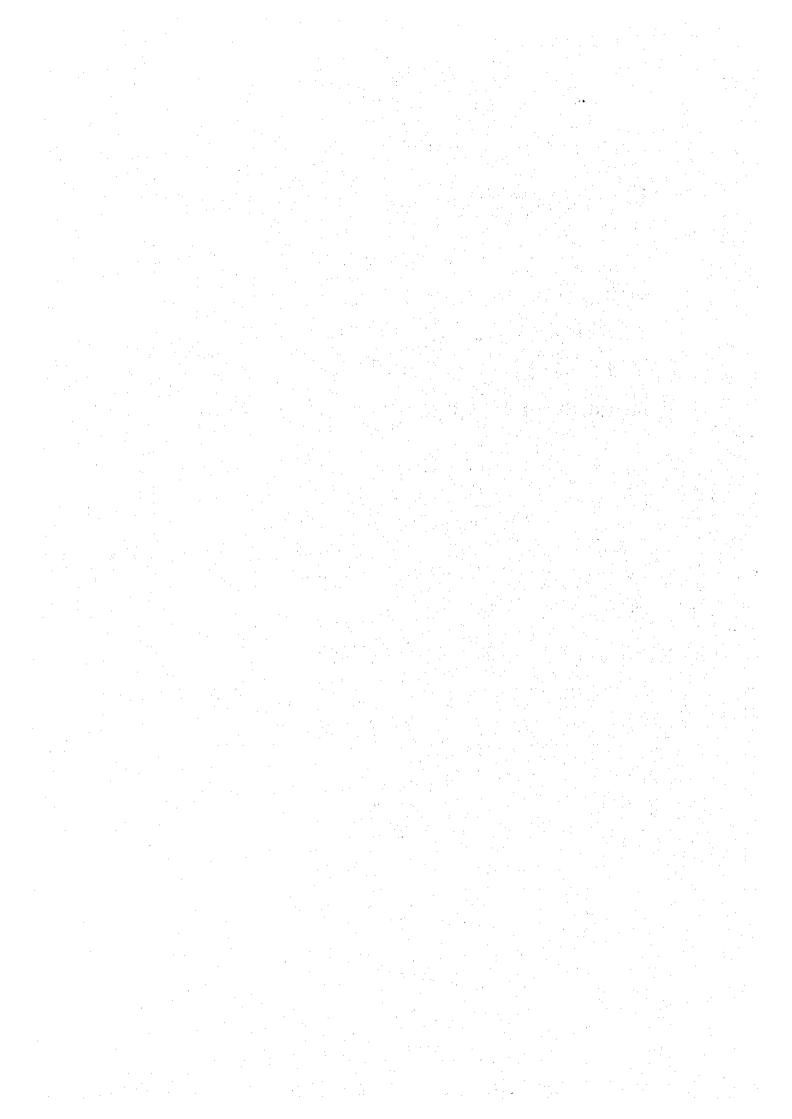
### Priority Program 3: RURAL HEALTH SYSTEM IMPROVEMENT PROJECT

1. Project No.	2. Project Title						
P-3		ystem Improvement	Droiget				
3. Project Location	i nui ai ri eaitir o	4. Target Beneficiaries		<u> </u>	5. Project Dur	ration	
Kericho, Bomet, Kisii, I	•	All the residents in the priority health centers		nt area of	5 years	iduvii	
6. Implementing Ager					7. Project Lev	rel	8. Project Priority
Project Management: I					Minimum / Bas	sic	High
Daily Project Monitorin		iff Management Teams					
9. Summary of Object							
		ervice capacity through:					
(1) Rural health mana	gement system stre	ngthened					
(2) Better quality of se		aa sa aatabliahad					
(3) Support for catchin 10. Justification	ient area oispensan	es re-established					
	e and network in ard	ler to realize district organ	irationa'	affort on h	aalth canàra da	disano	
		lealth Center level is tikel					ch
11. Expected Benefit		ICANI CONCERCENCE IS HAGE		ifiable Indi		orore approa	VII.
1	•	nakik dia natina di					
Management capac     Foldsmiological and	at priority H/Cs i! d workload data utili:	nstitutionalized;					its available and used;
<ul> <li>Epidemiological and - Facility and equipm</li> </ul>		.cu,		emiologica ànnual plai		oata appliet	d to logistics program
Quality of essential		and			s / referral / FIF	increased.	
		preventive activities			rage area of prix		ned
expanded	browning recently beson	protonino dominos					al agents increased.
13. Important Assum	ptions / Conditions	s for the Project					
- MOH/ PMO continu	se to support the pro	ject;					
<ul> <li>Key players within to</li> </ul>	the project are well of	juided to the common go	al; and				
<ul> <li>Community cooper</li> </ul>	ate to the improved	quality of services.					
14. Project Linkages					ant Agencies t		
		ogram (e.g. strengthening			NIDA), Health (	Center Com	mittees
management / program	m budgeting capacit	y of DHMTs) /PMIU proje	ct/	Keumbu I	₹C(AIDB)		
National (vertical) pro- 16. Major / Key Activ				47 Major	fmm::8		10 Ent of Contt
To. Major / Itej Acus	1063			17. Major Personne		Construc	18.Est'd Cost*
				FEISOIRI	materiors	tion	ĺ
□ Produce managem	ent and monitoring	manual on RHF's		x	-	ion .	
<u> </u>	•	ring and communication		x	<del> </del>	<del> </del>	US\$ 1.08 M.
channel to the all F	HFs	and commonication		^	X		033 1.00 W.
		pidemiological data and		х	<del></del>	<del>                                     </del>	
workload at priority	H/Cs and the distric	ots					
☐ Guide priority H/Cs	committees for the	project		Х			
Rehabilitate and en	ouio priority H/Cs	· · · · · · · · · · · · · · · · · · ·			x	x	US\$ 6.11 M.
☐ Introduce quality of		iority H/Cs		x	<del></del>	<del> </del>	
	•	•			<del></del>	<b></b>	11000 0 1111
against coloctics of	'Us increase tacility- isease / water protec	based preventive activitie	S	Х	х		US\$ 0.14 M.
19. Estimated Total		MAG1		l	<del></del>	J	1100 7 22 11
20. Necessary Exter		non i Arranger					US\$ 7.33 M.
	•	•			<del></del>		····
Rehabilitate and equi		*		<u></u>		Х	
	forbikes for integrate	ed supervision and monito	oring	l		Х	
(donor)				<b>_</b>		1	
Technical assistance	for facility-based pre	eventive activities and link	age	X		}	
ONUT a provide acces	e.g. NGU/School/U	ispensary) - (donor JOC	VS'/)	ļ		<b></b>	
the project	ssary information an	d assign tasks to all invol	n osv	X			
	project he secured	by PHC budget and FIF's	DHO	<del>                                     </del>	<del>-                                     </del>	<del></del>	
fund	biologine seculen	oj i no odogetano rir s	TIIV	×	Х	1	
				I	ı	Ī	I

<sup>\*</sup>Only facility and equipment

## **Chapter 20**

Concept Paper:
Community-Based
Promotive and Preventive
Health Care Program



# 20 COMMUNITY-BASED PROMOTIVE AND PREVENTIVE HEALTH CARE PROGRAM

#### 20.1 ESSENTIAL INFORMATION

#### **Project Objectives**

- 1. To promote community-based health care (CBHC) activities through community by:
  - (i) To strengthen the capacity of the community to start and manage the health promotion and income generation activities
  - (ii) To develop the strategies that community can become self-sustainable after short term support
- 2. To train government staff in charge of CBHC, community leaders
- 3. To activate government structure/system of PHC activities through capacity building of the PHC Committee
- 4. To establish a new district-level body to co-ordinate and empower CBHC activity groups
- 5. To establish a school health program to increase awareness of health among children, parents and teachers and improve children's health status

#### **Project Location**

Kericho, Bomet, Nyamira, Kisii and Gucha

#### Target Beneficiaries

- 1. Community
- 2. Community's field health workers such as community health workers [CHW], community-based distribution [CBD] agents of contraceptives and drugs, traditional birth attendants [TBA], traditional healers [TH] especially herbalists and local artisans
- 3. Community leaders, group leaders, school teachers

- Government health staff for CBHC (District PHC Co-ordinator, PHO, PHT, Field Health Educators [FHE], Nutrition Officers [NO] etc.) and DHMT members
- 5. School children

#### **Project Duration**

5 years

#### Implementing Agency / Body

District PHC Committee under District Health Management Team (DHMT)

#### 20.2 Project Rationale

While Kenyan Government is emphasising the importance of the preventive and promotive health care services <sup>1</sup>, PHC activities are not active at ground level as stated. There are various factors to explain this inactivity as follows.

- 1. Low commitment for PHC by the Government
- 2. Weakness of the government structure and system to support community-based health care (CBHC)
  - (1) Inactivity of DHMT Primary Health Care(PHC) Committee
  - (2) Low moral of health workers for extension services
  - (3) Poor communication between district and rural
- 3. Lack of the co-ordination among community group activities and lack of community empowerment experience

In order to activate the PHC activities, the following measures are proposed.

- 1. Reorienting the government officers for CBHC to work for the communities
- 2. Activating the DHMT PHC Committee as the key machinery to promote and co-ordinate community-based health care activities
- 3. Creating a district co-ordinating body for CBHC groups

<sup>&</sup>lt;sup>1</sup> MOH, Kenya's Health Policy Framework, November 1994, p. 22

- 4. Developing strategies to make CBHC programs "sustainable"
- 5. Educating the community on the prevention of the major diseases and health promotion
- Establishing school health programs

If the above suggested interventions are taken place in district, it is expected that government's PHC activities and awareness of the community will enable people to improve their health fair in a sustainable way. Expected benefits from the community-based preventive and promotive health care can be summarised as follows.

- 1. The government structure/system to promote community-based health care will be strengthened.
- 2. Health status of the community will be improved by health promotion and the prevention of the common diseases at the community level.
- 3. Effective mobilisation of community resources leading to self-sustainable community health activities.
- Overburden of the health facilities (especially overcrowded district hospitals) reduced.

#### 20.3 PROJECT COMPONENTS

## 20.3.1 Reorienting the government officers for CBHC to work for the communities

As explained earlier, the current government structure and system is not geared for promoting community-based health care, and most of government officers in charge of community-based health care (especially PHOs and PHTs) are inactive and rarely visit the communities which they are supposed to serve. So it is necessary to reorient and train them into the officers who really care about the rural people and are willing to go to the communities even by motorcycle or matatu. It is also recommended to introduce some kinds of incentive or recognition such as bi-annual "PHO/PHT Award" that will be given to whom achieves an tangible impact of PHC to the communities.

## 20.3.2 Activating the DHMT PHC Committee as the key machinery to promote and co-ordinate community-based health care activities

The government's capability to promote and co-ordinate CBHC activities is currently questionable. It is recommended to strengthen the DHMT PHC Committee to promote and co-ordinate community-based health care activities. In order to strengthen the PHC promotion, the Co-ordinator needs his/her capacity development to enable access the needs of the community, plan the activities, implement the activities and evaluate the progress of them. The main training for the PHC Co-ordinator shall be organisational/management skills to mobilise available budget and the government PHC staff as well as facilitating multi-sectoral efforts from the DDC's PHC Subcommittee members. In addition, the PHC Co-ordinator also needs to be trained for Participatory Rapid Appraisal (PRA) method to employ needs of health at the communities to their activity.

## 20.3.3 Creating a district co-ordinating body for community-based health care groups

At the same time, it is also necessary to create a district co-ordinating body (e.g., committee/association) of community-based health care groups in order to demand communities' need for health to the PHC Committee and the DHMT/DHMB. As mentioned previously, there are many groups at the community, but there have been little experience for the community groups to bring their resources and experiences under one umbrella organisation.<sup>2</sup>

This organisation will play the pivotal role in disseminating and replicating successful cases of some community groups to other groups by accumulating experiences and technical and managerial know-hows for successful community-based projects. The management body of this grass-root organisation will be established separated from government and can be composed of the representatives from the community groups and NGOs in district.

The proposed functions of this co-ordination body for the CBHC groups will be as follows:

- to facilitate information exchange among community groups
- to arrange exchange visits among community groups or study tours to other groups
- to provide technical and managerial training for the community groups leaders
- · to provide technical and managerial consulting services to community groups
- to provide training for community's field health workers (CHW, TBA, CBD, local artisans, etc.)

Maendeleo Y Wanawake Organisation (MYWO), a leading women NGO for rural development in Kenya, has umbrella type structure covering regional-wide women groups at district, province and national levels. Because MYWO has experienced structure and mechanism to bring regional-wide women groups together, this can be a good example for the above proposed district co-ordinating committee/association.

- · to develop health education materials for the use of field workers
- to establish a revolving fund to provide micro-credit for community groups' income generating activities

## 20.3.4 Developing strategies to make community-based health care programs "sustainable"

According to the JICA Study Team survey, key elements of successful community-based health care programs are as follows:

- the activities are based on the real needs and selected by the community or group members
- the activities are not limited to the direct medical problems, but also include the health related activities such as water and sanitation
- the community's or group's strong will to improve their lives
- · committed leadership in the community or a group
- good record keeping and transparency to the bank account
- fair and clearly stated rules shared among the group members
- clear and affordable member's obligations and contributions (e.g., membership fee, monthly deposit, labour contribution, material contribution)
- income generation activities to make funds available for the groups
- clear short-term benefits (not only the health benefit, but also the economic benefit) for the community or group members which give them the incentive to work harder
- regular supervision and advice by an outsider, until the community or the group becomes self-sustainable

Outside donors cannot continue to support community-level activities for ever, so it is important to develop clear strategies to make the community or a group become self-sustainable. The following are the possible strategies to promote self-sustainability of the community-based health care:

#### (1) Strategy 1: Providing start-up material kits as basis for revolving fund

In the Bamako Initiative projects, the drugs and mosquito bed-nets were donated to the community which were to be sold and the money are to be provide a basis for a revolving fund for the future re-supply. In the proposed project, the community groups will be given the start-up material kits to start their selected activities. They will be expected to sell these start-up materials and establish a revolving fund for future activities. The start-up material kits could be the following types to suit various needs of the community:

- malaria kit (e.g., bed-net, drugs, insecticides)
- · water and sanitation kit (e.g., cement, pipe, water tap, shovel, hand pump)
- reproductive health kit (e.g., TBA kit, contraceptives)

• income generation kit (e.g., sewing machine, carpenter's tools)

#### (2) Strategy 2: Combining health promotion and income generation

Some groups are making mosquito bed-nets for income generation (e.g., AMREF Nyamira Office is assisting the youth groups in their Adolescent Health Program). This type of combination of income generation by producing and selling health-related products should be encouraged through PHC promotion to make the group funds available. Japanese medical entomologist also advised the production mosquito repellent bars out of the locally available pyrethrum flowers at the community or at home.

#### (3) Strategy 3: Setting up monitoring indicators

Tenwek Community Health Program in Bomet district uses the following monitoring indicators. They are used to judge whether the community or the group, is capable of sustaining itself with reduced support;

- the number of the Village Health Committee meetings held in a year
- · the total number of the participants in the above meetings in a year
- · the number of the trained persons in the Village Health Committee
- the number of the trained Community Health Workers in the community
- the number (and the percentage) of the households in the community which have been visited or served by the Community Health Workers
- the number of environmental health facility (e.g., toilet) increased

The proposed project should identify a similar set of the indicators and criteria in order to monitor the progress, or problems, of the community-based health care activities.

## 20.3.5 Educating the community on the prevention of the major diseases and health promotion

Malaria is the biggest killer disease in the study area. According to our survey, many people in the community perceive that the causes of malaria are not only mosquitoes but also other factors such as contaminated water and food. People consider that to employ all the preventive measures to possible causes is technically difficult.

Mosquito bednets, insecticide sprays and mosquito coils are often seen by the community perceive too expensive to use. However, many people do not know the actual prices of them because they are rarely available in the local stores, and their image of high cost prevents people from looking for the prices. It is assumed that

A survey on "People's Knowledge, Attitude and Practice(KAP) and Market on Goods for Malaria Prevention" was done from June to August, 1998 as well as Malaria Case Management survey. The result of KAP Survey will be included in the Draft Final Report.

people reject their use of preventive measures because their high cost. It is considered that if people's understanding of the real causes of malaria could be increased the demand for appropriated preventive measure could go up.

Other areas for health education which the community needs are diarrhoea prevention and management, nutrition especially for children (as mentioned before), reproductive health and family planning, and safe water and sanitation. It is important to use appropriate media for health education in order to reach the community people. According to our survey, radio, folk media and mass campaign are regarded as the most effective media to convey messages to the widest audience. Radios are found in many households, and listening to the radio is a popular pastime among family members. In a radio spot, simple but easy-to-remember phrases can be broadcast repeatedly so that the messages penetrate the audience. But the problem of the radio programs is the high cost of buying air-time. Past experience shows that radio broadcasting cannot be sustained without sponsors. So it is important to solicit the potential sponsors for health education radio programs, not only among foreign donors, but also among Kenyan private companies.

For sustainability, the use of folk media (such as dramas, dances) are better, because they do not cost so much. There are many experiences using community activity groups (e.g., women groups) to deliver the health message through dancing and singing in the Study Area (e.g., a HIV/AIDS campaign in Kisii district in 1997). Since folk media are based on the local people's tradition and skills, the local people already have the potential to develop and perform. Folk media provide not only education but also entertainment for the community, so they can attract the wider audience.

The community can participate in the whole process of making folk media with the health messages: From identifying the health problems in their community, developing the health messages, designing the performance and to performing at public meetings such as chief's baraza. This process empowers the people. This participatory process can change people's attitudes and practices, because they are actively performing rather than passively listening. Their satisfaction after a successful performance will give them confidence to change life, and make them work further to improve their own life.

In Kenya, there are many national health-related mass campaign events such as National Immunisation Day, National AIDS Day, National Population Day. It is recommended to organise a new district-based health campaign such as District Malaria Day/Week or School Health Day. It seems to be relatively easy to solicit donors and sponsors to finance the part of the mass campaign activities, because of their high visibility in the media.

#### 20.3.6 Establishing school health programs

The number of schools are several times bigger than the number of health facilities, so if schools are involved in health activities, the impact on children's health will be great. But in Kenya, education at schools is limited to providing knowledge only.

In case of Japan, education at schools includes not only providing knowledge, but also physical fitness and civic education. Japanese school has a school nurse and a regular physical check-up for the pupils and students. The schools where the health condition of the students are very good are awarded "Good Health School Award" in the national level. In Uganda, health education using Child-to-Child approach is integrated in the national curriculum for primary and secondary education. So it is recommended for the Ministry of Health to collaborate with the Ministry of Education in order to seek for the possibility to incorporate health education in the national school curriculum as a long-term strategy.

In the district and the community, school headmasters, parents and teachers association (PTA) and the school board have the discretion to incorporate some school health activities such as regular physical check-up and health education as extra-curriculum activities. So it is important to sensitise school headmasters, PTA and the board members on the importance of school health activities.

#### 20.4 MAJOR ACTIVITIES

### 20.4.1 Phase 1 (year 1, 2 and 3): Pilot projects in the selected communities 4

- 1. Advocate and create awareness on the importance of CBHC approach
- 2. Train government CBHC staff for revitalisation of the District PHC Committee Contents for training:
  - organisational arrangement and management
  - community health needs assessment techniques (participatory rural appraisal (PRA))
  - · monitoring and supervision
- Conduct health needs assessment and identify the target communities
- 4. Train community leaders and group leaders Contents for training:
  - · leadership, record keeping and financial management
  - community health needs assessment technique (PRA)

School health programs will be developed in similar arrangement to activities of Phases 1, 2 and 3 mentioned here.

- basic knowledge on the major diseases and the prevention and home management of the major diseases
- · starting and managing income generation projects
- 5. Train community's field health workers (CHW, CBD, TBA, TH) Contents for training:
  - · updating knowledge/skills on health care
  - networking and possible linkages with rural health facilities
  - how to make associations of CHW, CBD, TBA, and traditional healers especially herbalists if there is a need for associations
- 6. Conduct PRA to design activities for the selected communities
- 7. Provide start-up material kits as a basis for revolving fund
- 8. Help the community to train and sensitise people Contents for training:
  - home diagnosis of malaria and the right timing to take patients to a health facility
  - nutrition and kitchen garden
  - safe water and sanitation (especially permanent toilet construction)
  - home/community-based prevention of major diseases (e.g., malaria prevention)
  - skills on health-related income generation projects (e.g., community pharmacy, mosquito bed-net production, mosquito coil/stick production, honey bee keeping)
- 9. Supervise and advise community until they become self-sustainable
- 10. Document and monitor all processes of promoting self-sustainable CBHC

## 20.4.2 Phase 2 (year 4): Establishment of a new district co-ordinating committee/association of community groups to promote CBHC

- Organise a district-level workshop, where the community in Phase 1 get together, exchange their experiences and identify the needs for a district-level co-ordinating organisation to promote CBHC
- Develop a detailed plan on how to establish a district-level co-ordinating body to promote CBHC (mission statement, organisation structure, management body, staff recruiting, government registration, initial fund, time schedule, etc.)
- 3. Establish a district-level co-ordinating body of community groups to promote CBHC according to the plan

## 20.4.3 Phase 3 (year 5): Expansion of CBHC activities to other communities

- Develop strategies and a mechanism to disseminate the successful methods used by successful projects to other communities, through collaboration between the PHC Committee and a district-level co-ordinating committee/association of group activity
- 2. Expand CBHC activities to other communities

#### 20.5 PROJECT OUTPUTS/INPUTS

#### **Major Inputs**

Technical assistance (e.g., training, advice for institution building) will be a key for all the activities. Initial funds and material inputs (e.g., start-up kits) as the basis of revolving funds in order to sustain CBHC activities. Transportation means (e.g., few vehicles and motorbike) for supervision of CBHC will also be essential.

#### **Donor Inputs**

External resource (donors: international and NGOs) and MOH program. Capacity building of PHC committee and DHMT will be promoted by technical assistance and material provision from international. As for CBHC promotion, NGO's involvement for community mobilisation will be critical.

#### **Expected Benefits/Outputs**

- 1. Government staff in charge of CBHC are given further training.
- 2. Community/group leaders and school teachers are given further training.
- 3. Community's field health workers (CHW, CBD, TBA, TH) are given further training
- 4. Self-sustainable CBHC projects are established.
- 5. A school health program is established.
- 6. Government system to promote CBHC is strengthened.

#### Verifiable Indicators

1. No. of trained government staff

- 2. No. of trained community/group leaders and school teacher
- 3. No. of self-sustainable CBHC projects
- 4. CBHC Supervision Records

#### **Estimated Cost**

US\$ 0.80 million (Only facility and equipment)

#### 20.6 OTHER PROJECT MANAGEMENT ISSUES

#### Project Linkages / Other Sector Linkage

Other line ministries at district: Social Services, District Development Office, Education, Water Resource and Agriculture/livestock

#### Relevant Agencies to be Co-ordinated

Existing expreiences of community-based projects by DANIDA, SIDA, USAID, IFAD and NGOs (e.g., Tenwek, Kaplong and Action Aids in Bomet, AMREF in Nyamira)

#### Important Assumptions / Conditions for the Project

- 1. Decentralisation process continues and especially, bottom-up planning approach is accepted.
- 2. Government decides to put more emphasis and resources on community-based health care.
- 3. Government (HQ and local) revitalises District PHC Committee

#### 20.7 PROJECT IMAGE

As the result of the proposed project implementation, it is expected that the district-level government structure to coordinate and promote the primary health care(PHC) activities such as PHC Committee in District Health Management Team (DHMT) and PHC Sub-committee under District Development Committee (DDC) will be revitalised and strengthened. This new structure will effectively facilitate and promote sustainable community-based health care (CBHC) activities at various community through the District-level Committee or Association of CBHC Activity Groups.

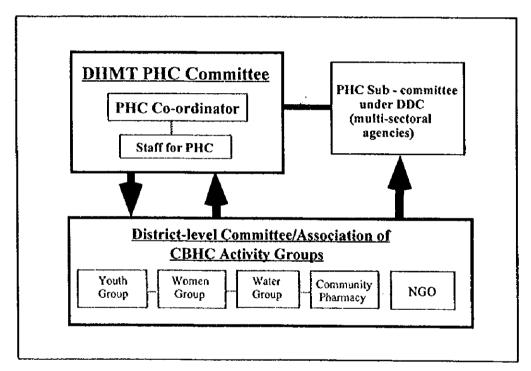


Figure 20.1 Proposed Machinery for the PHC Promotion at District

# Priority Program 4: COMMUNITY-BASED PREVENTIVE/PROMOTIVE HEALTH CARE PROGRAM

P-4 3. Project Location Kericho, Bornet, Nyamira, Kisii, Gucha Districts 6. Implementing Agenc "District Primary Health C 9. Summary of Objection (1) to promote communication (2) to activate government (3) to train government (4) to establish a new	Care (PHC) Committee" under DHMT ves nity-based health care (CBHC) activities through community	5.	Project Duratio rears Project Level Basic	8. Priority
3. Project Location Kericho, Bornet, Nyamira, Kisii, Gucha Districts  6. Implementing Agenc "District Primary Health C  9. Summary of Objectiv (1) to promote commu (2) to activate governmen (3) to train governmen (4) to establish a new	4. Target Beneficiarles 1) Community 2) Community leaders/group leaders 3) Government health staff for CBHC 4) School Children cy / Body Care (PHC) Committee" under DHMT ves nity-based health care (CBHC) activities through community	5.	rears Project Level	
Kericho, Bomet, Nyamira, Kisii, Gucha Districts  6. Implementing Agenc "District Primary Health ( 9. Summary of Objectiv (1) to promote commu (2) to activate governmen (3) to train governmen (4) to establish a new	1) Community 2) Community leaders/group leaders 3) Government health staff for CBHC 4) School Children cy / Body Care (PHC) Committee" under DHMT ves nity-based health care (CBHC) activities through community	5)	rears Project Level	
Nyamira, Kisii, Gucha Districts  6. Implementing Agenc "District Primary Health ( 9. Summary of Objectin (1) to promote commu (2) to activate government (3) to train government (4) to establish a new	2) Community leaders/group leaders 3) Government health staff for CBHC 4) School Children by / Body Care (PHC) Committee" under DHMT ves nity-based health care (CBHC) activities through community	7.		L O Oriovity
6. Implementing Agence District Primary Health ( 9. Summary of Objecting (1) to promote community to activate government (3) to train government (4) to establish a new	3) Government health staff for CBHC 4) School Children by / Body Care (PHC) Committee" under DHMT ves nity-based health care (CBHC) activities through community	7.		L O Ociority
"District Primary Health (  9. Summary of Objectin (1) to promote commu (2) to activate governmen (3) to train governmen (4) to establish a new	cy / Body Care (PHC) Committee" under DHMT ves nity-based health care (CBHC) activities through community	7.		O Oriority
*District Primary Health ( 9. Summary of Objectin (1) to promote commu (2) to activate governmen (3) to train governmen (4) to establish a new	Care (PHC) Committee" under DHMT ves nity-based health care (CBHC) activities through community	7.		
9. Summary of Objectin (1) to promote commu (2) to activate governa (3) to train governmen (4) to establish a new	ves nity-based health care (CBHC) activities through community		Racic	
<ul><li>(1) to promote commu</li><li>(2) to activate governmen</li><li>(3) to train governmen</li><li>(4) to establish a new</li></ul>	mity-based health care (CBHC) activities through community		0030	Medium
10. Justification     Prevention of disease     Effective community     Overburden of the he     11. Expected Benefits     Local government standard better trained and are better trained.     Self-sustainable CBI     Government system     13. Important Assump     Decentralization pro	aff in charge of CBHC are better trained; aders, community's health field workers and school teacher d; HC projects are established; and Ho promote CBHC activities is strengthened. Potions / Conditions for the Project Cess continues. (Especially bottom-up planning approach is acc	s field health worker CBHC activity general continues.  ealth activities.  reduced.  12. Verifiable from the continues.  No. of trainers school teach  No. of self-succed.  CBHC Supercepted.)	reis roups  Indicators  I government state Community/gro	oup leaders and
<ul> <li>Government decides</li> </ul>	s to put more emphasis and resources on community-based he	aith care.	gencies to be (	Ponedinated
	Other Sector Linkage ht: Social Services, Dev. Office, Education, Water Resource,	DANIDA, SIDA,	gencies to be t , USAID, IFAD, I	VGOs
Agriculture/livestock	lion .	17. Major inpu	<u> </u>	
16. Major / Key Activit	ues	Personnel	Materia	ls Funds
			Motoric	
	BHC staff to revitalize the PHC Committee	x		×
	ds assessment and identify the target community	X		Х
☐ Train community lea	aders and group leaders on CBHC activity	х		Х
☐ Train community's f	ield health workers (CHW, CBD, TBA etc)	х		х
	terial kits as a basis of revolving funds	х	×	
	se the community until they become self-sustainable	×		
☐ Establish a school f	health program through sensitization of school teachers, s and School Board members	×		
☐ Establish a new dis	trict-level coordinating committee/association of CBHC activity	х		
☐ Expand the CBHC	activities to other groups	х	х	х
	esses of promoting self-sustainable CBHC	<del>                                     </del>		
1			1100 0.01	L
	Cost (only facility, equipment and supply)		US\$ 0.8 k	1.
	nal Inputs / Assistance / Arrangement			
	local) revitalizes District PHC Committee	X		
and recurrent costs to	trong will/commitment to prepare required personnel, facilities secure sustainability of CBHC activity	x	х	Х
Oonor assists training	, supervision, start-up kits and transportation for supervision	x	Х	X

# **Chapter 21**

Concept Paper:
District Health Service
Education Program

## 21. DISTRICT HEALTH SERVICE EDUCATION PROGRAM

#### 21.1 ESSENTIAL INFORMATION

#### **Project Objectives**

To establish a sustainable system of Continuing Education (CE) in the districts. To provide appropriate training for all district health workers.

As a result of proposed program, all professional and technical staff, Boards and Community Health's Workers and Community Health Worker will have 2-3 days training per year.

#### **Project Location**

Kericho, Bomet, Kisii, Nyamira, Gucha

#### **Target Beneficiaries**

All health workers in the Districts

#### **Project Duration**

5 years

#### Implementing Agency / Body

District Health Management Teams and MOH Hq.

#### 21.2 PROJECT RATIONALE

Personnel play a key role in all aspects of the health service — its governance, its implementation and its support by the community. There have to be adequate numbers of people in appropriate positions, and they must have the required knowledge and skill and be properly orientated and motivated.

The process of decentralisation, which the Health Service Reform Policy requires, necessitates the appointment of many local citizens to the new Hospital Management

Boards and District Health Management Boards, and to the Health Centre and Dispensary Management Committees. Finding suitable people and providing them with the necessary orientation and training are urgent tasks.

There is currently a shortage of trained professional and technical staff throughout the country. This shortage is aggravated by maldistribution - many senior staff wishing to remain in the capital city, and many others preferring District towns to rural areas. This national shortage is reflected to varying degrees in each of the Districts of the Study Area. A further aggravating factor is the low morale of a large number of the MOH staff, so that their performance is often below their capacity. Increasing the numbers of professional and technical staff, who are trained and deployed to each District, is not under the control of the District but remains the responsibility of the MOH Headquarters and the Kenya Medical Training Centre (KMTC). Each District is, however, responsible for the following:

- the supervision, continuing education and development of all professional and technical staff once they have been assigned to the District. In addition some members of the subordinate staff (e.g. drivers, ward attendants, untrained community staff assisting in dispensaries) also need training.
- 2) the orientation, training and development in the skills of governance of the newly appointed Management Board and Facility Committee members.
- the training and development of community-based health care managers and workers.
- 4) the orientation of staff from health-related Ministries and organisations, involved in intersectoral activities

It is well recognised that in all professional fields the basic training obtained at the beginning of professional life needs continuous updating. This is especially so in fields such as medicine which are undergoing rapid change and development. In the last ten to twenty years such updating has not been available to many health staff. Those most lacking this opportunity for updating have been those with relatively simple and short basic training who are posted to rural areas. This has resulted, together with other causes, in a decrease in the quality of care provided to unacceptably low standards.

Developing a District Education Program has already been started in some Districts, with the appointment and training of District Continuing Education Co-ordinators (DCECs). These people have been selected from existing district staff such as a Public Health Nurse, Officer or Health Educator, and have undergone a training program organised by the MOH CE Unit. The training has consisted of three two-week workshops on management and teaching methodology, conducted over a period of one year. In the District a Continuing Education Sub-committee of the DHMT has been established, with the DCEC as chairman. It is currently proposed that in those Districts taking part in this program, a further group of four "core teachers" should also be given training in teaching methodology to be able to support the program.

The District Continuing Education Programs described above have concentrated on the continuing education of professional and technical staff. They have not, as yet, been directly concerned with the orientation and development of the Board and Committee members or the training of those concerned with community-based health care.

One of the key elements of the Health Reform Process is decentralisation. This has involved the creation of District Health Boards, Hospital Management Boards and Facility Management Committees for health centres and dispensaries. A variety of local leaders, professionals, business men and retired civil servants have been appointed to these Boards and Committees. While their commitment to serve is not in doubt, their ability to do so effectively without appropriate orientation and development is problematic. To be effective, an understanding of the role of governance, as opposed to management, is required. It is also necessary to have some knowledge of the extent of different health problems in the area, and how the health services could prevent or alleviate the major ones.

For many years the Ministry of Health has accepted the policy of Primary Health Care as outlined in the Alma Ata Declaration. Its potential for revolutionizing health care by preventing, instead of just curing, diseases has led to numerous protective interventions such as immunisation, provision of clean water and a more sanitary environment, and community health education. Support for this policy to strengthen community-based health care has been re-confirmed in the Health Reform plans.

It is, however, extremely difficult, from headquarters (the top) to promote what is, by definition, a community, or bottom-up activity. With decentralisation the responsibility for this promotion now lies with the District Health Management Team (DHMT), who have a District Primary Health Care Co-ordinator (DPHC Co-ordinator). It is the aim of this project to create the capacity within each District to undertake all these requirements for comprehensive human resource development.

#### 21.3 PROJECT COMPONENTS

#### 21.3.1 Appointment of District Continuing Education Coordinators

For the District to take full responsibility and manage their continuing education programme it is essential that they should have a person in charge of the programme. If it is left to the DHMT as a whole, without a responsible person, it will not function effectively. Therefore, each District will select a suitable person from their existing staff - one who is respected professionally and is expected to be a longtime resident of the District - and they will be given further training in managing and implementing continuing education programmes. This training will be undertaken by the MOH Hq. CE unit and follow the existing pattern.

Initially these District Continuing Education Coordinators (DCECs) will undertake their CE activities in addition to their present duties. However, as the programme developes it may be necessary to have full time District Continuing Education Officers (DCEOs).

#### 21.3.2 Develop District Education Plan Needs Assessment

A comprehensive human resource development programme requires an inventory of all personnel involved in the health services - for governance, implementation and community support - and a record of their previous training. A simple "Needs Assessment" is then necessary before a plan of action can be prepared. The plan should identify the priorities and integrate all the different facets of human development. Develop Learning/Training Materials Based on these findings appropriate training modules will be designed (or copied), learning materials collected and workshops and refresher courses will be planned. It is critical that these are integrated with the training undertaken by the national health programs such as KEPI and HIV/AIDs. A recent MOH report on the Integration of Training (Human Resource Planning and Development Workshop July 1997) makes recommendations as to how this may be done. It is essential that these recommendations are implemented to ensure headquarter support for the District programs.

#### 21.3.3 Implement Educational Plan

#### a. District Health Management Team

For the DHMT to fulfil their responsibilities they will certainly need outside help, both with their own development and in carrying out their program. As a first step, the further development of capability of the DHMT is an urgent matter. Different kinds of training programs have already been implemented in different districts with varying degrees of success. These programs need evaluation, standardisation and application to all the five Districts in the Study Area. It should be noted that all attempts at developing the capability of DHMTs are undermined by the frequent transfers of staff, especially the MOH.

#### b. Professional and technical staff

Some of the continuing education will be in the form of multi-disciplinary workshops and some as technical courses for individual cadres. Regular guidance and supervision of the rural health facilities will be a key activity in the CE program. In the past this has generally been intermittent and perfunctory. Lack of transport has been one important reason. Some supervisory staff will need further instruction on making full use of visits, on the use of checklists, proper reports and records, and providing on-the-job training. These guidance visits will be an essential tool in upgrading staff and in determining weak areas of performance that require more extensive training. It is proposed that to begin with all professional and technical staff should have atleast one one-week refresher course every two years - i.e. 3 days per year.

#### c. Management Board and Committee Members

In the past District training programs have not been concerned with the orientation and training of those appointed to Boards and Committees. The Provincial Medical Officer's office shall assist in the orientation and development of the members of the District Health Boards (DHBs). The methods used can then be modified and repeated with the members of the health centre and dispensary committees.

It is proposed that in the early days of decentralization all members of Boards and committees should have two days per year for orientation and training.

#### d. Staff for Community-based Programs

A program for training those concerned with community-based activities - health service staff, village committees and CHWs, TBAs, etc - will be developed with the District PHC Co-ordinator. (See Chapter 20 Community-based Promotive and Preventive Health Care Program).

For calculating the amount of training required an arbitary figure based on three days training for forty community-based managers for each District per year has been assumed.

#### 21.3.4 Establishment of "District Learning Centres"

Many training and development activities can be carried out without special facilities or resources. This applies particularly to guidance and on-the-job training. However, the supervisor must be able to visit the health workers' place of work. This poses demands on transport to rural health facilities and community projects. Without transport available frequently and regularly, supervisory activities, which must be an essential part of human resource development, cannot take place. The costs of transport must be balanced against the cost of failing rural health services and the ensuing overcrowding of District Hospitals.

When it is necessary to bring people together, a seminar room/hall is required. Suitable places are not easily available in Districts - especially the new Districts - and often workshops and courses have been held in hotels, which are expensive.

At such times simple equipment and supplies are required. A blackboard, flip chart stand and an overhead projector are appropriate. Increasingly, some topics are well covered on videotapes; hence, a video machine and monitor can be helpful. This should be concomitant with a small library to increase the number of people interested in and capable of learning from written materials. New developments in communication technology and tele-medicine are taking place at an increasing pace and may find a place in a District library/resource centre sooner than currently imagined.

#### a. Training Requirements in "Man-days"

Estimates of the number of "Man-days" of training required for those involved in the governance, implementation and community support of the District health services are shown in Table 21.1. It can be seen that 9,631 man-days are required for the five Districts.

It is appreciated that these estimates of the man-days for training required in each District are no more than rough approximations of the needs and that their realisation depends on the necessary funding being available.

To address these needs for training facilities, equipment and supplies, the establishment of "District Learning Centres" is proposed. A minimum facility would consist of a seminar room/hall for thirty participants, a small learning resource room/library, and an office for the DCEC. The addition of accommodation for participants and facilitators would increase Centre's value. However, it would also increase the complexity and running costs and raise the question of sustainability.

Table 21.1 Estimate of "Man-days" Required for Training Per Year

(1) MOH Professional and Technical Health Staff

	Kisii	Gucha	Nyamira	Sub Total	Kericho	Bomet	Sub Total	Total
No. health staff	590	105	438	1133	632	264	896	2029
Man-days for Training	1770	315	1314	3399	1896	792	2688	6087

(2) MOH Boards and Committees

(2) 1/103	I DVALUS	and Con	illilite vo			<u> </u>		
	Kisii	Gucha	Nyamira	Sub Total	Kericho	Bomet	Sub Total	Total
No. Boards / Comm	ittees							
Hosp. Board	1	1	1	3	3	l	4	7
Dist. Board	1	1	1	3	1	i	2	5
H/C Committees	7	7	9	23	9	7	16	39
Disp. Committees	19	13	15	47	49	37	86	133
Total No.Board	28	22	26	76	62	46	108	184
Total No. of Board A Corn. Members (average per Board /Com.:8	3	176	208	608	496	368	864	1472
Training Days								
Man-days for Training	448	352	416	1216	992	736	1728	2944

(3) Community-based Health Care Managers

	Kisii	Gucha	Nyamira	Sub Total	Kericho	Bomet	Sub Total	Total
No. C-bHC workers	40	40	40	120	40	40	80	200
Man-days for Training	120	1 <b>2</b> 0	120	360	120	120	240	600

(4) Total

(1) XVII	••							
	Kisii	Gucha	Nyamira	Sub Total	Kericho	Bomet	Sub Total	Total
Total Man-days for Training (1,2,3)	2338	787	1850	4975	3008	1648	4656	9631

Notes:

<sup>(1)</sup> Assuming each member of staff has one week of training every two years i.e.3 days per year

<sup>(2)</sup> Assuming each Board/committee member has two days of orientation/training per year

<sup>(3)</sup> Assuming each C-bHC Manager has 3 days training per year

#### b. Location of District Learning Centers.

It is proposed to establish a Learning Centre in each of the five Districts. It is suggested that one of the facilities in the three Kisii Districts and one in Kericho/ Bomet should also have residential accommodation.

The decision as to where such facilities should be located depends on a number of criteria:

#### 21.4 MAJOR ACTIVITIES

- Each DHMT in the study area would identify and appoint a District Continuing Education Co-ordinator (DCEC). The MOH CE Unit would conduct a training programme for them three two-week workshops spread over six months. (Additional DCECs from other Districts might be included in this programme)
- On return to their Districts the DHMT would establish a Sub-committee for Continuing Education, with the DCEC as chairman. The DCEC would initiate the preparation of a District educational plan, based on an inventory of all involved in the health services, including their previous training and stated needs. A needs assessment study would be undertaken, starting with priority groups from the governance, implementing and supporting personnel. The plan would give a detailed programme for immediate implementation and tentative long-term proposals.
- ☐ The location for the District Learning Centres would be confirmed and plans drawn up (see Supporting Discussion 5, Annex 2).
- Taking into account the agreed criteria to be used for selecting the locations the participants at the Technical Meetings made the following recommendations: -

<u>District</u>	Location	Type of Centre			
Kericho	Kericho	Non-residential			
Bomet	Kapkoros	Residential			
Nyamira	Keroka	Residential			
Kisii	Marani	Non-residential			
Gucha	Ogembo	Non-residential			

- Plans and instruments for the monitoring and evaluation of the programme would be prepared.
- There would be a workshop for Supervisors of the rural health services and checklists, records and schedules prepared. This would coincide with the provision of adequate transport for the revised schedule of supervisory visits.

- Education programmes designed and health learning materials assembled for professional and technical staff
- Board and committee members
- O Community-based health staff
- D Priority training would be undertaken
- Establish management committee for Learning Centre and set up procedures for handling receipt of funds
- Construct and equip Learning Centres
- Undertake mid-term evaluation of project

#### 21.5 PROJECT OUTPUTS/INPUTS

#### Major Input

Constructing and providing equipment for the Learning Centres

#### **Donor Inputs and Arrangement**

The implementation of a project involving many people in the Ministry of Health Headquarters, PMO's office, DMOs office and in the community requires cooperation from many quarters, including other donors and agencies working in the same areas.

It is critical that the process of decentralisation continues so that all the projects concerned with strengthening District health systems are given the authority to implement the activities.

At headquarters it is necessary for the CE Unit to undertake the training of the newly appointed DCECs and to provide the appropriate support for them when trained. It is also necessary for the process of integration of the training programmes of the national health programmes (e.g. KEPI, HIV/AIDS) to proceed so that co-ordinated support and finance can be provided to the District programmes.

It will be necessary for those agencies assisting the MOH CE Unit e.g. SIDA and also those funding some of the national health programmes e.g. UNICEF, USAID and World Bank to provide continued support.

Assistance that has been given to the Ministry and Districts by various local agencies e.g. AMREF, Aga Khan Foundation and Health Service, JICA KMTC

project needs to be included and extended. In particular their experience and support for training DCECs, the health service managers and community-based health workers should be utilised.

The revitalisation of the human resource development programme depends on the ability to communicate with all concerned. This requires improved transport facilities and proper maintenance.

The planning and construction of District Learning Centres will require donor support though once built they will become self-sustaining.

#### **Expected Benefits / Outputs**

Identification and training of DCECs in District
District CE programme and plans produced
Facilities, equipment and learning materials for CE provided
Communications for appropriate supervision provided

#### Verifiable Indicators

Number of DCECs identified and trained District CE plans and learning materials available CE Centres constructed and equipped Numbers of people trained

#### **Estimated Cost**

US\$ 2.07 million (Only facility and equipment)

#### 21.6 OTHER PROJECT MANAGEMENT ISSUES

#### Project Linkages / Other Sector Linkage

MOH CE & (vertical) Health Programme Units NGOs & CBOs in the District requiring or providing CE

#### Relevant Agencies to be Co-ordinated

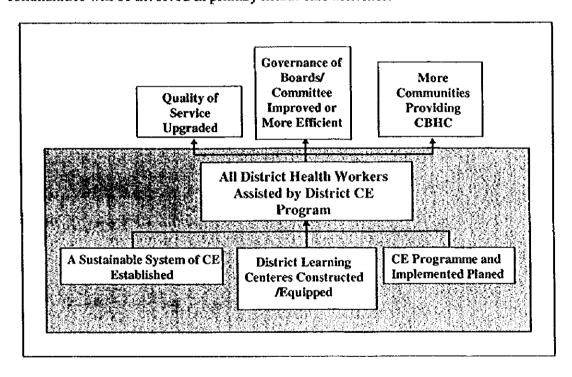
Bilateral Donors (e.g. SIDA, USAID)
Multilateral Agencies (e.g. UNICEF, UNFPA)
National Agencies (e.g. AMREF & KMTC)

#### Important Assumptions/Conditions for the Project

Health Reform process continues: Management Boards and Committees appointed: Districts appoints CECs and assume responsibility for all CE activities MOH national training programme (e.g. KEPI) cooperate with district CE programme: DHMTs, Communities and trainees support programme and provide increases in cost-sharing funds

#### 21.7 PROJECT IMAGE

As a result of the proposed project implementation (grey area), the quality of service will be improved, governance of Boards/Committees will function more efficiently, and more communities will be involved in primary health care activities.



### **Priority Program 5: DISTRICT HEALTH SERVICE EDUCATION PROGRAM**

1. Project No.	2. Project Title							
P-5	A District Healt	h Service Education Progra	am					
3. Project Location	3. Project Location 4. Target Beneficiaries			5. Project Duration				
Kericho, Bomet, Kisii, t	All health workers in the Distric	ŧs	5 years					
6. Implementing Ager			7. Project Level 8. Project Priori					
District Health Management Teams, MOH				В	asic	High		
9. Summary of Object								
		kshop for all the necessary perso	nnels throu	gh:				
(1) Establish a sustain								
(2) Provide appropriat	e training for alt distr	ict health workers		··········				
10. Justification								
		notion, prevention and curative -						
		quality of governance of the healt	in service n	eeds orienta	ation and deve	elopment		
		d quality need to be improved	1 40 1/2	C_L1_ I_ J:				
11. Expected Benefits		District		12. Verifiable Indicators				
<ul><li>Identification and tra</li><li>District CE program</li></ul>				Number of DCECs identified and trained     District CE along and legisland materials applicable.				
		rials for CE provided		- District CE plans and learning materials available				
				CE Centers constructed and equipped     Numbers of people trained				
	nications for appropriate supervision provided - Numbers of people trained ant Assumptions / Conditions for the Project							
		agement Boards and Committees	s annointed					
		sponsibility for all CE activities	appointed					
		PI) cooperate with district progra	m					
		pport program and provide incre		sharing fur	vis			
14. Project Linkages					cles to be Co	ordinated		
MOH CE & (vertical.) Health Program Units				Donors (e.g. SIDA, USAID)/ International Agencies (e.g.				
NGOs & CBOs in the District requiring or providing CE		UNICEF, UNFPA) / National Agencies (e.g. AMREF) / &						
		_	KMTC,	who provide	e CE activities			
18. Major / Key Activities			17. Major input					
			Pers	onnel	Material	s Construction		
☐ Train DCECs				x				
□ Needs assessment				х				
<ul> <li>Prepare program to</li> </ul>				X				
	☐ Establish monitoring and evaluation program for CE		}	х				
☐ Train District super	visor stall and estab	lish schedule		Х				
☐ Ensure adequate of	ommunication and to	ansport			х			
Start regular CE ac	tivities, including su	pervision		х	Х			
☐ Confirm sites for C	E centers		X					
☐ Construct and equi	p CE centers		T		Х	Х		
□ Undertake evaluati			1	x				
18. Estimated Total Cost*				US\$ 2.07 M.				
19. Necessary Input	s / Arrangement	<del></del>						
MOH CE unit (with do		t DCEC training		Х				
DCECs obtain suppor				X	Х			
		EF, Aga-Khan) with program	<del></del>	x	^			
support	232,000 10.3. 14/11	ar prigarenanj mar program		~				
Donor support for construction and equipment						Х		
	and adobt							

<sup>&#</sup>x27;Only facility and equipment