UPHOLD

UGANDA PROGRAM FOR HUMAN AND HOLISTIC DEVELOPMENT

REVIEW OF IMPLEMENTATION OF THE HOME-BASED MANAGEMENT OF FEVER STRATEGY IN UPHOLD SUPPORTED DISTRICTS

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[1]MALARIA CONSORTIUM AFRICA , Plot 2, Sturrock Road, Kololo, Opp Lohana Academy, P.O.Box 8045 Kampala, Uganda.

[2]Uganda Program for Human and Holistic Development (UPHOLD),
Nakawa House, Plot 3-7 Port Bell Road,
P O Box 40070 Kampala, Uganda.
(Tel: 256-31-2262162/4/5)
Fax: (256) 414-222 860
Email: upholduganda@upholduganda.org

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List of Acronyms

ACT	Artemisinin-based Combination Therapy
APOC	African Program on Onchocerciasis
AQ	Amodiaquine
ART-LUM	Artemether-lumefantrine
AS	Artesunate
BCC	Behavioural Change Communication
CAO	Chief Administrative Officer
CBSCo	Community-based Services Coordinator
CDA	Community Development Assistant
CDD	Community Drug Distributor
CER	Cost-Effectiveness Ratio
CORPs	Community Own Resource Persons
CQ	Chloroquine
DADI	District Assistant Drug Inspector
DCI	Development Cooperation Ireland
DD	Drug Distributor
DDI	District Drug Inspector
DDHS	District Director of Health Services
DFID	Department for International Development
DHT	District Health Team
DOTS	Directly Observed Therapy Short-course (TB)
EANMAT	East Africa Network for Monitoring Antimalarial Treatment
EPI	Expanded Program on Immunisation
FGD	Focus Group Discussion
GAVI	Global Alliance for Vaccines and Immunisations
GFATM	Global Fund to Fight AIDS, Tuberculosis and Malaria
GoU	Government of Uganda
HBMF	Home Based Management of Fever
HC	Health Centre
HMIS	Health Management Information System
HSD	Health Sub-district
IDP	Internally Displaced Persons
IEC	Information Education Communication
IMCI	Integrated Management of Childhood Illness
KPI	Kampala Pharmaceutical Industries
LC	Local Council
MC	Malaria Consortium
MoH	Ministry of Health
NDA	National Drugs Authority
NGO	Non Governmental Organisation
NMCP	National Malaria Control Program
NMS	National Medical Stores
PHC	Primary Health Care
RBM	Roll-Back Malaria
SHSSPP	Support to the Health Sector Strategic Plan Project
SP	Sulfadoxine Pyrimethamine
TB	Tuberculosis
TBA	Traditional Birth Attendant
UNICEF	United Nations Children's Fund
UPHOLD	Uganda Program for Human and Holistic Development
USAID	United States Agency for International Development
VHT	Village Health Team
WHO	World Health Organization
WV	World Vision

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EXECUTIVE SUMMARY

Since 2003 the Uganda Program for Human and Holistic Development, (UPHOLD) project, has worked with district health authorities and other partners to support the strategy of Home-based Management of Fever (HBMF) launched by the Ministry of Health to increase access for children under five years to appropriate treatment within 24 hours of onset of fever. This review was undertaken in order to use lessons of the first years to guide and refine UPHOLD's support and promote scaling up of high quality HBMF implementation. The purpose is to review the HBMF strategy and implementation in UPHOLD-supported districts and make concrete, specific and practical recommendations on strengthening the implementation of HBMF at household, community and facility levels, current delivery mechanisms, and how to sustain the intervention.

Information was collected in late April to May 2005 through interviews with key informants at central, district, health subdistrict and subcounty level and focus group discussions with drug distributors, community leaders and community members. The four districts of Rukungiri, Bushenyi, Lira and Kamuli were selected to throw light on a range of different experiences of HBMF implementation.

Four primary areas of focus were identified in early discussions and document review, and the major findings and recommendations for each are summarized as follows:

1. Strategy of Drug Distributors

It was clear from the interviews and focus group discussions that detailed planning of the process of HBMF from its inception has reaped benefits in terms of widespread clear understanding of several aspects of the strategy. There are, however, gaps at some levels in the understanding of roles and ownership of the strategy, and this was related in some cases to taking shortcuts in the process of orientation rather than problems with the strategy.

Most evidence is available in the document review and the fieldwork. It indicated that involvement of drug distributors in other community health activities is likely to be the best strategy for sustaining their active participation. It increases the frequency of various incentives (material, supervision and recognition).

Recommendations

General

a) The overall success of HBMF leads to a recommendation to maintain and expand the approach.

Selection

b) Selection of the most appropriate Drug Distributors (DDs) is essential, and requires community mobilization to ensure significant representation of the community beyond the LC1 Committee in the selection process.
c) The selection of Parish coordinators among groups of DDs is a practical innovation to improve reporting and drug collection and distribution.

Training

d) As HBMF goes to scale, it is critical not to allow shortcuts in the process of training DDs. Regular refresher courses and quarterly supervision meetings with DDs are also essential, and need to be addressed with regard to budgeting and planning.

Motivation, Incentives and Retention

e) A mechanism needs to be developed through which peripheral Local Governments such as sub-counties and village LC1s commit resources to meet the basic requirements to facilitate the work of DDs.

f) The types of incentive most needed by DDs are greater recognition and tools of their trade rather than a salary. A systematic program coordinated by MOH is needed to remind all actors how they can demonstrate appreciation to DDs.

g) Districts should strengthen the supervision and monitoring systems to detect early those who drop out and put in place a mechanism of continuous training for replacement at health facility level. Districts may need support to build capacity at every health facility to carry out tailor-made training for new entrants.

Integration

h) The system of Village Health Teams (VHTs) is a more appropriate way than single function volunteers of providing services in communities with multiple health challenges that require the input of community volunteers. By reducing the geographical area covered by each volunteer, the workload should remain feasible.

i) Capacity for integration needs to be built at district and lower levels both in terms of training and resources. This can be supported by pooling funds from different sources at district level or allowing for flexibility in the districts for various programs.

2. Drug Supply and Improving Delivery Mechanisms

Problems noted in earlier reviews with drug supplies were less evident in the current review, at least up to district level. The main problem at present is the continuation of the Push system alongside the Pull system of delivery. It is also not helpful to exclude Homapak from the Essential Drugs List. Weaknesses in supervision of drug supply and storage were noted, and few DDs were provided with suitable storage materials.

Whilst the strategy of ensuring more prompt treatment through Homapak containing chloroquine and SP combination has been shown to be better than having no HBMF, levels of resistance demand a change of drugs for HBMF as soon as possible. New problems are anticipated with the change of policy for first-line anti-malarial treatment, but measures can be put in place to avoid these problems.

Recommendations

Supply system

1. Donors should channel their Homapak supplies directly through MoH, which should have the authority to distribute this Homapak to the beneficiary districts using the pull system. MOH should also have the authority to distribute any extra Homapak to other districts in need. This approach would

help the NMS to process orders and organize distribution in a more effective and efficient manner. The Homapak co-ordination team and the case management working group of the ICCM should prioritize these issues.

2. Homapak and any agreed successor should be included in the Essential Drugs List and the ordering list for essential drugs.

3. Success of the Pull system depends on the accuracy of DDs' reporting. Where reporting is very poor, urgent efforts should be made to improve it.

   A system needs to be developed to monitor Homapak supply beyond the health unit. DADIs could include this in their routine drug inspection activities.

Responding to the drug policy change

- ART-LUM should be systematically introduced when issues of sustainability of supply have been resolved, provided it remains MoH's drug of choice. WHO should be requested to supply ART-LUM for operational research on acceptability and feasibility as soon as possible to avoid delays in implementation when program supplies become available.

- Efforts are needed to ensure no gap in supplies of anti malarial drugs for HBMF. This will require regular communication between UPHOLD and MoH in order to have sufficient supplies of Homapak containing CQ-SP, until the change is made.

- The possibility of a change to amodiaquine-SP (AQ-SP) either on an interim or long term basis, has a number of attractions in relation to cost and efficacy. Recommendations on this option are beyond the scope of this review, except to suggest that operational research, particularly on the issue of acceptability, be undertaken without delay, so that as much evidence is available as possible to make rational decisions.

- When a replacement for CQ-SP is selected, there is an argument for maintaining the term Homapak in the name of supplies for HBMF, in order to build on community understanding that it is a drug for children under five years old. It will be essential to avoid overuse of ART-LUM by adults, and this could contribute to achieving some control. A slightly modified name, such as Homapak Plus or Homapak 2 could be used to indicate that the contents have changed.

3. Support Supervision and Monitoring and Evaluation

Supervision is poor for several reasons including inadequate training of supervisors, inadequate staffing in health units, ambiguity on the role of MoH and Local Government in managing HC1s and inadequate funding allocated to HBMF activities through the PHC funding system. Reporting rate of DDs is low because of lack of supervision, low motivation and long distances to health units to deliver reports. Various strategies to improve supervision, monitoring and evaluation were assessed.

Recommendations

1) Quarterly review meetings held at supervising health units (HCs 2, 3 & 4) should use the preferred mode of DDs' supervision.

2) Quarterly supervision of each DD's work place should be carried out to assess performance. All trained health personnel, at the supervising unit, should be trained and mandated to participate in DDs' supervision using a standardized supervision tool.

3) The supervising health unit should develop a duty roster for staff to collect DDs' data through DDs' meeting at parish level They should use this same opportunity replenish DDs' stocks of Homapak. The DDs can be given a transport allowance each time they come to these meetings. A health worker could extract the data from the DDs' records on to the HF summary sheet, while seeking clarification directly from the DDs on any gaps or omissions in the records.

4) Integrated quarterly meeting of supervisors should be held at districts and health sub-districts to improve supervisor's performance. HBMF should be an integral issue of these meetings.

5) All HC2s, including non-government facilities where they agree, should be involved in the HBMF program including DD supervision.

6) HBMF activities should be integrated into the parish development activities to ensure funding from Local Governments. Under this arrangement, the MOH and the Directorate of Community services should work together to conduct the technical support activities and the coordination and planning aspects respectively. This will be more applicable with the introduction of VHTs.

4. IEC, Advocacy and BCC

There is evidence that behavioral change in treatment of malaria in children has occurred. It is important to build on this to reach a scale where national targets for seeking early and adequate treatment are achieved. The messages for home-based treatment when the drug policy changes to more expensive drugs will need very careful design and testing to ensure fully adequate but not excessive use of new drugs. The role of DDs as agents of IEC needs to be developed within their capacity.

Recommendations

1. IEC and BCC activities should be scaled up, sustained and modified on the basis of feedback.

2. DDs' training should be strengthened to improve their skills in IEC/BCC.

3. Use of multiple approaches (community/leaders' meetings, radio programs, radio talk shows & other appropriate channels) is required to mobilize stakeholders (central government, local authorities, civil society and communities) on their expected contribution to motivation of DDs, as the review found poor understanding of this.

4. IEC and BCC activities should be instituted early enough to prepare health workers, DDs and communities for the drug policy change.

Specific Recommendations for UPHOLD

While many of the above recommendations can be best addressed by Ministry of Health and district Local Governments, areas where UPHOLD can provide useful support are summarized as follows:

At National Level:

1. Spearhead advocacy for a coordinated drug delivery system
2. Support development of an IEC strategy for drug policy change

At District Level

1. Facilitate an integrated support supervision process that covers HBMF
2. Facilitate the coordination of HBMF drug supply system between neighbouring districts i.e. excess drugs should be supplied to neighbouring districts that may be lacking the drugs
3. Facilitate the delivery of drugs from the district stores to the health units
4. Facilitate the establishment and implementation of an annual district wide DDs' replacement plan
5. Support training of DDs in IEC/BCC

At Health Centers III & IV

1. Facilitate the training of all health unit staff not yet oriented to supervising HBMF activities including DDs. Retraining should also be supported (annually or every two years)
2. Facilitate the planning and holding of regular quarterly DDs' review meetings at supervising health units

At Community Level

1. Facilitate the orientation of the Health Unit staff, health assistants, LC2s and LC3s, community development assistants in the role of HC1 (community) activities. This orientation will encourage the integration of HBMF and other community health activities into the parish development plans with subsequent funding from the sub-county
2. Supply bicycles and monthly travel allowance to parish supervisors. This should be an interim activity with emphasis that the parishes and sub-county are expected to take over the transport allowance part.
3. Supply the DDs with the necessary materials and equipment to facilitate their work (making it clear which tools of the job the community is expected to furnish).
4. Support regular re-training (annually or every two years) of DDs

REVIEW OF IMPLEMENTATION OF THE HOME BASED MANAGEMENT OF FEVER STRATEGY IN UPHOLD-SUPPORTED DISTRICTS

1 Introduction

The Uganda Program for Human and Holistic Development (UPHOLD) is a 5-year bilateral program funded by the United States Agency for International Development (USAID) under Strategic Objective 8 (SO8: Increased Human Capacity). Communicable diseases control is one of UPHOLD's core areas for technical interventions. Malaria, TB and schistosomiasis form the main focus of communicable diseases control activities. UPHOLD's main strategies include among others: working within district plans and priorities and increasing involvement of communities and families.

This review was commissioned to document lessons to support the scaling up of HBMF implementation, as well as to address issues related to supervision and monitoring the progress of HBMF implementation, motivation of DDs and appropriate Homapak (drug) storage, stock taking and estimation (pull) system. It explores means for strengthening the HBMF delivery mechanism and options for sustaining the intervention. The Scope of Work is attached as Annex 2.

2 Purpose

To review the Home-Based Management of Fever strategy and implementation in UPHOLD-supported districts and make concrete, specific and practical recommendations on strengthening the implementation of HBMF at household, community and facility levels, current delivery mechanisms, and how to sustain the intervention.

3 Background and Literature Review

3.1 Background

Malaria transmission is endemic and perennial in approximately 90% of Uganda, with *Plasmodium falciparum*, the species responsible for severe malaria, being the dominant parasite. Malaria is the leading cause of morbidity and mortality accounting for 25-40% of outpatient visits at health facilities, 20% of all hospital admissions and 14% of all hospital deaths. The Ministry of Health in Uganda established its National Malaria Control Program (NMCP) in 1995, and considerable progress has been made in putting in place interventions to reduce the burden of malaria.

In accordance with the Abuja target and the Health Sector Strategic Plan I & II (HSSP) target of increasing to 60%, the proportion of children under-five years having access to appropriate treatment within 24 hours of onset of fever, Uganda launched the Home Based Management of Fever (HBMF) Strategy in June 2002. This entailed the training of community-based drug distributors to distribute pre-packaged unit dose anti-malarial drugs marketed as "Homapak". With the support of partners, the MoH is currently scaling up this strategy countrywide with all 56 districts at different stages of implementing the strategy. The availability of Global Fund

monies (Round 4) means that it will be possible to implement the strategy in all districts.

To date, the 20 UPHOLD supported districts have varying levels of coverage with HBMF services, with support from different partners;. MOH, UPHOLD, WHO, UNICEF, SHSSPP, WV and others. Nine (9) UPHOLD supported districts (Katakwi, Kamuli, Rukungiri, Bugiri, Rakai, Kyenjojo, Wakiso, Gulu, and Kitgum) have been implementing HBMF for over 2 years, Seven (7) (Arua, Bundibugyo, Mayuge, Lira, Yumbe, Pallisa, and Luwero) started implementation during FY 2003/2004 and 4 (Bushenyi, Mbarara, Mubende, Nakapiripirit) have come on board during FY 2004/2005.

However, with the experience of implementation, a number of issues and challenges which affect the strategy at the central, district, community and the consumer levels are becoming apparent, which will be explored in the review.

3.2 Literature Review

This literature review aims to provide the context for the review findings and to ensure the review explores key information gaps within the limits of its scope of work. It relates to the tasks in the Scope of Work (Annex 2), and focuses on recent documents from Uganda. A brief general literature review on home-based management of fever in and beyond Uganda is attached as Annex 3.

1. **Comparison of Approach for DDs and other CORPS (Task 2)**

   A study was being planned (Byamungu and Degeyter, 2005) to explore the interrelationship of the outcomes of ivermectin distribution, Homapak distribution and EPI mobilization to look at opportunities for streamlining. The Community Drug Distributors for ivermectin are selected and vetted by their communities. The approach adopted for Community Directed Treatment with ivermectin has been reported to enhance sustainability, community empowerment and ownership as well as being cost-saving. It has been noted that ivermectin distributors work better if involved in more than one program. CORPs who are selected through the kinship process or who are female, are less likely to demand incentives. While the model is similar to Homapak DDs, the latter have a greater workload, as ivermectin distribution is once a year, but are addressing a problem recognized by the community as a burden, so that they may be more widely appreciated and supported.

   About 50% of DDs in Kiboga District are also involved in other community health activities (MoH, 2003). Masindi expedited scale-up of HBMF by building on existing capacity in IMCI and onchocerciasis control. Districts called on MoH to be more supportive of integration through basket funding or flexible use of donor funds.

2. **Selection of Drug Distributors (DDs) (Task 3)**

   In an assessment of implementation and operation of HBMF at district and community levels in Kumi, Kiboga and Masindi in February to March 2004 Batega *et al.* (2004) noted that DDs were selected democratically by community members as directed in the implementation guidelines. Overall, 70% of the selected DDs were also working as Community Resource Persons (CORPS), indicating a relatively high degree of integration of HBMF into other community-based health activities.

3. Training of DDs (Task 4)

The experiences from district workshops, (MoH, 2003), highlighted the need to ensure that enough health workers are oriented and empowered to train and supervise DDs. Adjumani District linked training of DDs with that of health workers to manage severe malaria, a very positive approach to ensure a continuum of care. Rukungiri improved training by decentralizing funds to health facilities to arrange training. The 2003 survey (Fapohunda, 2004) noted that lack of training of health workers compromised their capacity to train and support DDs.

4. Monitoring, Support and Supervision (Task 5)

According to Batega *et al.* (2004) almost all aspects of the health system/facilities support required for successful HBMF implementation in the community needed to be strengthened in the districts they assessed. Significant ruptures in supplies of Homapaks were seen at all levels of the system, posing a serious problem for the program. Many DDs reported difficulties in re-establishing their position as a source of Homapaks in the community, and there was an apparent loss of motivation in other DDs. The 2003 survey (Fapohunda, 2004) also highlighted the problem of high stockout rates. *This issue was found to be less serious in the current review, reflecting better national supplies of Homapak, although distribution to DDs remains inadequate.* There were also shortfalls in IEC materials, guidance for DD attrition and replacement, re-fresher training, supervision, and provision of modest supplies needed by the DD. *These problems remain.*

The district workshop (MoH, 2003) endorsed the idea of quarterly meetings for interaction with health workers, drug replenishment and supervision. It noted that supervision proved difficult, but noted districts' innovations to try and increase it. Rukungiri district uses PHC funds to facilitate supervision and continuous training of DDs. Supervision on-site is a major challenge: in Kumi only 33 and 44 of 850 DDs were visited in 2002 and 2003 respectively. Nakasongola has addressed supervision needs by having quarterly supervision at an agreed place and day in each parish to minimize travel distances for DDs. They achieved 74% of DDs supervised. Kamuli district recommended integration in the village health team concept, and Kyenjojo fully incorporated supervision into routine integrated supervision.

5. Motivation, Incentives and Retention of DDs (Task, 6-9)

A workshop in August 2003 to share district lessons from one year of HBMF implementation (MOH, 2003) highlighted motivation, supervision, monitoring and supporting other child survival interventions as the key challenges. It was noted that DDs had great commitment and in most of the ten districts were treating more children than the health facilities. Attrition rates were reported to be below 10% per year in most districts except Adjumani where it was 21% in 14 months. (*Note: higher levels are reported in the current review).* Rukungiri increased health worker motivation to support DDs by including DD reporting in the expected outputs that affect performance appraisal. Masindi experienced high turnover on DDs among internally displaced people (MoH, 2003). In Kitgum and Gulu it was noted that supervision and equitable distribution of resources (T-shirts etc.) were important motivating factors (Malaria Consortium, 2004). In Kumi and Kiboga anticipated Local

Government / community contributions to facilitation of DDs were not forthcoming (Batega *et al.,* 2003).

6. Knowledge and Perceptions of HBMF and Homapak (Task 10)

The study by Batega *et al.* (2004) found that DDs' knowledge on presumptive diagnosis and treatment of malaria using Homapak is high, with 96% knowing correct dosage for children below two years of age and 100% for children 2-5 years of age. The DDs also gave relatively good advice to the caregivers about the management of their sick children.

The majority of caregivers who went to the DD before going to the health facility said they were happy with the way the DDs handle their sick children.

A study from December 2003 to January 2004 in Kumi district found a relatively low proportion of caretakers using Homapak (30.7%) compared to treatment with other medicines at home (41%, N=522). Use was associated with ownership of cattle, higher mean age, knowledge of Homapak, village meetings as a source of information, belief that Homapak cures and availability. Non-use was associated with being a peasant, fear of side-effects, presence of cough or vomiting and younger age group. This study calls for more community sensitization, but also points to potential inequity in access to treatment.

A sociological study in Kumi and Kiboga (Batega *et al.,* 2003) showed DDs were widely used and available even at night.

7. Political Commitment (Task 11)

Batega *et al.* (2004) noted that participation of community leaders in the selection of DDs was high (89%). The level of community support for DDs was fairly high, with 44% of the DDs having received some kind of support from the community members. *This seems better than reported in the districts of the current review.*

8. IEC/BCC and Advocacy Interventions (Task 12)

In the assessment by Batega *et al.* (2004) *o*nly about two-thirds of the DDs received information-education-communication (IEC) materials, which are important tools for relating to the caregivers. Qualitative research undertaken in August and September 2001 (pre-Homapak) (K2-Research, 2002) noted that management of childhood malaria involved all members of the household and community. While mothers made the most immediate decisions, fathers made decisions with financial implications, so it was recommended that they should be a key focus on IEC/BCC. Radio and health workers were the commonest sources of information, and the health workers were the most trusted source. There was a gap in awareness of danger signs by both community and health workers.

The report of the HBMF 2003 survey (Fapohunda *et al.*, 2004), which took place in four HBMF-implementing districts (Kumi, Kiboga, Kamuli and Kanungu) and two non-implementing districts (Lira and Ntungamo), noted better counseling in districts with HBMF than in non-intervention districts, but counseling on danger signs, referral, feeding and giving fluids was rarely given. A gap between knowledge and practice was noted with 73-94% of caretakers knowing that sick children with fever should receive treatment within 24 hours, but only 56% of actually seeking treatment within 24 hours.

Information Gaps to be Addressed in the Review

As HBMF has been deployed relatively recently, starting in 2002, a number of the information gaps relate to learning how HBMF maintains the original standards developed, how it improves with experience or how it deteriorates with lack of incentives. The following information gaps have been identified:

a) The literature is very supportive in integrating community health activities. It is also important to know more in practice about the capacity of DDs taking on more roles, how this affects their performance and length of service.

b) There is little information on appropriateness of the criteria set out for selection of DDs.

c) The literature on training focuses largely on numbers of DDs trained and capacity of health workers to manage them. There is data on knowledge post-training, but more information to assess the appropriateness of training norms is needed.

d) The literature emphasizes weakness of systems to support DDs, but also highlights context-specifications. The review needs to determine if drug supply remains a problem and what is the outcome of innovations to improve supervision.

e) The issue of cash payment of CORPs is generally dismissed by the literature. To what extent is motivation through non-monetary incentives cost-effective? (Note: it is beyond the scope of this review to undertake cost comparisons of incentives to retain DDs against regular replacement and retraining, but it should be possible to guage whether the issue is critical to the future of the program, and identify successful approaches).

f) The variable utilization of DDs needs further investigation to identify major constraints to their use.

g) Has political support which was garnered in the original sensitization been maintained?

h) To what extent is the gap between knowledge and practice identified in the literature been narrowed on longer access to HBMF?

4 Methodology

The review was undertaken by a team of three consultants together with research assistants for recording and transcribing interviews and focus group discussions.

Following review of the Scope of Work, key background documents and initial interviews four primary areas of focus were identified:

1. Strategy of Community Drug Distributors (DDs)
2. Drug supply and improving delivery mechanisms
3. Support supervision and monitoring and evaluation
4. IEC, advocacy and BCC

Issues to be explored in each of these areas were listed and used as the basis for a matrix of questions to be asked. Appropriate sources of information for each question were identified and specific interview/discussion guides were developed for each type of informant. Methods of investigation were focus group discussions (FGDs) at community level and interviews at other levels. Informants were as follows:

Central
MoH – National Malaria Control Program (NMCP), and Pharmacy, WHO, UNICEF, Support to the Health Sector Strategic Plan Project (SHSSPP), National Medical Stores (NMS), Uganda Program for Human and Holistic Development (UPHOLD), Malaria Consortium.

District
Chief Administrative Office (CAO), District Director of Health Services (DDHS), Community-based Services Coordinator (CBSCo), District Malaria Focal Point (DMFP), District Assistant Drug Inspector (DADI), District Storekeeper.

Health Sub-district and Sub-county
In-Charge of Health Unit, Community Development Assistant (CDA), Home-based Management Focal Point, In-Charge of Health Sub-district, Sub-county Council Leader.

Community
Drug distributors, community leaders, community members (male), community members (mothers of children under five). A list of FGDs conducted in shown in Annex 4.

Using criteria agreed with UPHOLD four districts were purposively selected to undertake district-based discussions out of the twenty supported by UPHOLD. Kanungu district (formerly part of Rukungiri district) was also visited to study the experiences of the onchocerciasis community drug distribution program which was more that ten years old. The reasons for selection of the districts are shown in the table below:

Table 1: Reasons for Selection of Districts

District	Rationale for selection	Location
Bushenyi	Newly implementing district with recent malaria epidemic	West
Rukungiri	More than 2 years of implementation and also with a community drug distribution program for onchocerciasis which has not moved to the new created district of Kanungu	West
Lira	More than two years but with displaced communities and Village Health Teams (VHT)	North
Kamuli	More than two years old	East

In addition one of the consultants conducted an under-five clinic in Awach Health Centre 3 (Lira District), for the whole morning, where the consultant had direct access to information from mothers who had brought children under five years for treatment.

5 Findings

5.1 Strategy of Drug Distributors (DDs)

5.1.1 Appropriateness of the DD strategy

The strategy of using community-based drug distributors in the management of malaria among children was generally hailed, as a good idea by informants for this review. Study participants at all levels (national, district, and community) were almost unanimous in their appreciation of the approach. The appropriateness of the strategy is clearly illuminated when the roles of the DDs are considered. These, according to the Guidelines, include the following:

- Treating children who have fever/malaria
- Identifying children who need to be referred to the health facilities and advising the caretakers on the need
- Educating mothers on the need for prompt treatment and compliance
- Follow-up on treated children to ensure compliance with treatment and advice
- Recording given treatment, its outcome and reporting to the nearest health facility
- Working with the community to collect drugs from the nearest health facility or distribution centre

Positive Experiences

In communities where the approach has grown roots, both the local leadership and community members have positive remarks about HBMF given their varying experiences.

> *"….It is a good system which uses our own people whom we know and who are easy to access"* (FGD Balawoli Sub-County Local Council Leaders, Kamuli District)

> *"….I have even woken up someone at 3.00 am and told him my child is badly off and he gave me drugs"* (FGD Adult Male Household Members Kagarama Village Buhunga Sub County Rukungiri District)

Even in Bushenyi District where the DD strategy was being newly introduced at the time the research team visited the communities, local authorities and the general population looked forward to better, quicker services. Many argued that the relevance of the approach could not be doubted especially because, hitherto, people usually sought the drugs from unqualified dealers in shops, markets and general stores:
"….We buy from the shops; you can't say that any of shopkeepers are trained. At least these ones (DDs); *they will go and get training and come back rather than those ones who just want money and don't even know how the drugs work but care about only the money. This DD strategy is right"* (FGD Adult Men (Heads of Households) Bihanga Sub County, Mburamizi Village, Bushenyi District)

At the community level, the appropriateness of the DD strategy is perhaps more vivid when challenges of inaccessibility to health care as a direct result of chronic poverty and vulnerability are taken into consideration. Household members including children experience several episodes of malaria each year, in some cases at a moment when the family can hardly afford the next meal. Overwhelmingly, therefore, the DD strategy is hailed as a relief especially to the poor who would otherwise not benefit due to cost of care

"….We need them very much because there are homes you will find can't even get 100/= and yet children will fall sick" (FGD Adult Men Bihanga Sub County, Mburamizi Village, Bushenyi District)

"….Before Homapak if you did not have any money you would not access any drugs but with Homapak is free of charge. So it came to help the poor mothers like us" (laughter) (FGD Mothers of children under 5 years Barokwok Village, Amach Sub-county Lira District)

For many other families, treatment with Homapak within the village is a kind of 'first aid' the child gets while preparations are made to seek further attention with more qualified service providers in private or public health facilities. This allows the household time to organize resources if possible, and, in many cases, it becomes unnecessary to move to the next level since the children get well. Many DDs continue to play their rightful roles within their capacities and resource limits with vigilance, and the beneficiaries are appreciative:

> *"….For me I haven't seen anything wrong with it. If your child gets sick you take him to the DD and the medicine helps him, then the next day you can take the child to the doctors"* (FGD Adult Male Household Members Kagarama Village Buhunga Sub County Rukungiri District)
>
> *"….With our own DD, we are sure of her because she works well and checks on you until the dosage is finished….we also haven't had any bad reports from elsewhere. We always use her drugs"* (FGD Kawaga mothers of children under 5, Butalage LC 1, Balawuli Sub county, Kamuli District)
>
> *"….Previously, when a child fell sick, you had to wait while the sickness worsened especially at night. Now, that is different, the sickness is quickly arrested"* (FGD Balawoli Kawaga Men LC1 Butalege Balawuli Subcounty, Kamuli District)

In all, the idea to bring on board CORPS to address one of the common challenges communities face, malaria, is a good idea. Indeed, in all the four districts the research team visited at the time of the study, passionate appeals were made to include other age groups over 5 years in this arrangement. In Rukungiri, for instance, questions were posed directly to the research team whether or not Government intended to consider adults as well or whether other pressing community health problems could be addressed using the same approach. Rukungiri is one of the districts where the Village Health Team (VHT) concept of integrating community-based programs has not been introduced. In Lira district where VHTs are operational, they handle a number of community health issues including water and sanitation, nutrition, prevention and management of malaria, among others

> *"….We have various responsibilities, we give medicine for malaria, elephantiasis and hydrocoel"* (laughs) (FGD VHT members, Amach Sub-county, Lira District)
>
> *"….We do follow up of the sick people in addition, we keep records and deliver them to the health centre and also refer to the health centre, the very sick children whom we cannot handle. We also teach them how to use Homapak, we also check on the water they use; the water should be clean and the environment also should be clean* "(FGD VHT members, Amach Sub-county, Lira District)

The work of VHTs is visible and well appreciated in the communities served. In Lira district, Amach sub-county was visited to study the VHT concept. Amach has not suffered the direct challenges of internal displacement like other parts of the district. The VHTs have been operational for two years now

A number of community members were asked to comment on the input of VHTs in improving health in their area. Some of their responses as given below:

> *"….They* (VHT members) *also sensitize the public. They teach you how to use the drugs. They really do the work. Even if it is midnight, they treat the child. They are not selling the drugs. The VHT also teach us about clean sanitation and especially drinking clean water and about having toilets"* (FGD Adult Male Household Members Amach Lira District)

> *"….I would still like to emphasize that the VHT members are doing a good job, they like their work, they mobilize and work hand in hand with LCs"* (Chairperson LC111, Amach sub-county, Lira District)

Reservations about the DD strategy

Pockets of disapproval of the DD strategy and questions about its appropriateness have been raised. Some are simply sentiments partly as a result of inadequate sensitization of the people about HBMF. Others could pass as mere misconceptions. All are important to report since they have implications for acceptability of the service and attendance. For instance, people are aware that fever could be a result of other diseases and not necessarily malaria. Therefore using Homapak for every type of fever in not advisable. Fears such as the one quoted here are common:

> *"But sometimes I fail to agree with* (the strategy); *there are times when you find the child is suffering from another type of fever. In that case it is futile to give a child such tablets without checking to know the type of fever. Without the hospital for a check up Homapak can't make the child well"* (FGD Adult Male Household Members Kagarama Village Buhunga Sub County Rukungiri District)

There are also concerns regarding the limits of DDs' capacity to handle fevers of varying severity. However, DDs have been trained to understand the scope of their work, and to make referrals in case of complicated cases of fever. However, in practice, adherence to these guidelines is challenging. In some situations, caretakers are reluctant to report to the health units for higher level diagnosis and management of cases, and instead request DDs for more Homapak. This puts the DDs in a difficult situation and communities fear that this could make them repeat treatment in children who would otherwise have been referred to health facilities. Such fears were expressed in Kamuli district, where DDs have been in place for over 2 years and have received limited supervision. The community leaders were particularly concerned about this and recalled almost similar experiences with community based TBAs:

> *"….Previously we had village birth attendants; they used to tell us that mothers delivering for the first time were not handled at their level, only at the Health Units, but after some time, the TBAs started handling every case. This is the same situation with DDs. Now our village doctors have forgotten making referrals*

for severe situations…parents just bring back the patient to the same place where no different treatment is available" (FGD Balawoli Sub-County Local Council Leaders, Kamuli District)

These kinds of anomalies can be minimized when support supervision is strengthened. In addition, BCC to caretakers emphasizing referral, roles of DDs & their limitations would minimize such incidents.).

"….The main thing is to give Homapak to those who are qualified perhaps in nursing, or those who are educated up to S.4 or S.3, they should be selected and trained to distribute the drugs … otherwise the system is very good" (FGD Adult Male Household Members Kagarama Village Buhunga Sub County Rukungiri District)

"….To be honest, if a person goes to the health unit, it helps a lot. An expert understands issues of health better… How are you going to teach a local village adult to be a DD at this time? …. You think you will manage?" (FGD Adult Men (Heads of Households) Bihanga Sub-county, Mburamizi Village, Bushenyi District) This skepticism was brings out the need for IEC and BCC to the beneficiaries about HBMF

The findings above provide entry points for improving the HBMF approach through community education and communication about key aspects of the strategy to allay fears and correct misconceptions perhaps on a regular basis. The findings also point to the need for further training of DDs, mentoring and supervision to assure quality service.

5.1.2 Identification and Selection of DDs

Adherence to Recommended Criteria

For effective implementation of HBMF, it is clearly recommended that the right persons are selected as community drug distributors. According to the MOH guidelines a suitable distributor should be:

- Easy to approach
- Trustworthy and reliable
- Permanent resident in that community
- Basically literate (can read and write)
- Willing to work as a volunteer

In order to meet the above conditions, and to enhance community ownership and participation, the entire village council, comprising adult men and women is expected to be sensitized and guided in the selection of their preferred volunteer (DD). Thus the full village community should be involved not simply the LC1 Committee. Previous studies have indeed underscored the importance of communities as having a crucial role to play if malaria control interventions are to succeed. Root *et al.,* (2003) shows that in the introduction of HBMF, communities in the selected districts were sensitised on the approach and involved in the implementation and the identification as much as possible of individuals in whom they have confidence to strengthen the management of fever and malaria. The present review shows that within districts, many local authorities made every effort to follow the guidelines, as illustrated by the quote below;

"….We gathered as a community cell and picked names to represent us, then we voted. So it is the people themselves who chose the volunteers". (FGD Adult Male Household Members Kagarama Village Buhunga Sub County Rukungiri District)

Identified Irregularities in the selection of DDs

The role of the community leadership is well articulated in the MOH, HBMF guidelines; they are encouraged to guide the communities to select volunteers using the recommended qualities, and are advised to avoid suggesting any names. Leaders are also urged to guide their communities on gender considerations since experience has already shown that in many areas women serve as better drug distributors. They were further advised to guide the community to take into consideration the location of the distributors in the community making sure that no areas are left under-served. However in some instances the guidelines may not have been adequately followed as indicated in the statements below:

"….There are some DDs whom we don't know how they were picked but in other villages people gathered and were told to pick DDs one from each extreme end of the cell" (FGD Adult Men (Heads of Households) Bihanga Sub County, Mburamizi Village, Bushenyi District).

In some instances, Chairpersons of local councils (LC1s), seem to have taken advantage of inadequate community awareness to appoint their relatives and political friends. Cases of this nature were mentioned in Bushenyi district.

"….For me it was a Sunday and we were at church praying, then the Chairman told me that I was fit for the job of DD and that I should go for training. So I have trust that since the Chairman gave me the job, I will do it" (FGD Drug Distributors Bihanga Sub County, Mburamizi Village, Bushenyi District)

Similar tendencies of disregard for guidelines for selection of DDs, for political and other selfish considerations, were mentioned in Kamuli and Lira .

"….Other zones selected well. In some zones when the local council authorities got involved, the exercise was politicized… such that even one who was not capable could be selected because the Chairman has selected them or influenced the choice."

"….We did not select those people. We only had an announcement at church that these are the people selected as community volunteers and they were supposed to meet somewhere. A meeting was not called, the LC1 chose the people he thought were competent…. The LC chose randomly the people he wanted, and not the community. If the meeting for selection was called, then we women never heard about it" (Mothers of children under 5 years Barokwok Village, Amach Sub-county Lira District).

Communities' own Selection Criteria

In many instances, communities added other dimensions in the selection criteria for the DDs. For instance in Kamuli, as part of the campaign against poor hygiene and sanitation practices, potential DDs were required to have clean toilets, This encouraged homesteads to improve their facility or to construct one. Other communities were more interested in members less likely to migrate or move in and

out of the community. For example young married women who were considered unstable in their marriages were least likely to be selected as DDs:

> *"….Manners or behaviour were also considered highly. Women who separate or divorce from their homes every time only to rejoin their marriage were not selected* "(FGD Kawaga mothers of children under 5, Butalage LC 1, Balawuli Sub County, Kamuli District)

The quality of social interaction of potential DDs within the community was an important consideration as well.

> *"….In my cell we were about 4 people who volunteered then they selected two. They wanted someone who …… and had no dogs at home and was welcoming"* (FGD Drug Distributors, Buhunga Sub county, Rukungiri District)

These added values imposed by the communities in selection of DDs, were seen as good indicators of community involvement in the selection of DDs.

The Volunteers' Expectations

This review has established that the majority of 'volunteers' working as DDs had their own expectations. Some hoped that in the long run, personal benefits would accrue to them, most likely from Government, the initiator of HBMF. Some felt that Government initially wanted volunteers in order to exclude persons likely to take it entirely as a form of business or employment.

It may be for this same reason that LCs were keen to interfere with the selection criteria to bring in their relatives or spouses. For the last two years of the program, many DDs have continued to live with this hope; that someday, somebody will start paying them. With time, this hope is slowly fading and so is morale for work. However, some DDs have maintained the spirit of voluntarism and have maintained drug supplies and regular reporting. Some incentives given to DDs at different stages of the intervention and by different funding partners seem to have raised expectations.

> In Kamuli district, DDs who were first selected in two parishes at pilot stage were given money and the people learned about it. When HBMF was scaled up throughout the rest of the sub-counties, there was a lot of lobbying. This was confirmed by Local Council leaders in one of the interviews with the research team. Similar expectations were prevailing in Bushenyi district at the time of the study; some DDs selected had lobbied with their local leaders to take the assignment. When they heard it over FM radio stations, many lobbied their Chairpersons and asked to have their names considered.

Further, there is nearly universal consensus that DDs require torches with battery cells or kerosene for lanterns and match boxes in the event of late night cases of fever. On the DD list of essential requirements are umbrellas, identity wear (eg badges, uniform tee-shirts), bicycles, and boxes for keeping the drugs safe. Others add containers such as a bag for carrying the drugs, spoons and safe water containers. These and other tools are not yet provided:

"….They give us only the drugs then we get for ourselves a jerrycan for clean water, plus a spoon for giving medicine. They said we need torches…but never gave them to us… also lanterns" (FGD Drug Distributors, Buhunga Sub county, Rukungiri District)

This system has really pressed us (DDs) *because people can come to you even in the night to get treatment… you use your kerosene and matchbox…. from our localities to Balawoli (the Health Unit) is a very long distance. We travel to pick drugs and report…we come back with nothing ……Our families ask us if there really isn't anything the government is doing for us……..*

Gender Considerations

Gender issues related to identification and selection of DDs were explored. Generally more communities opted for women to constitute the majority of DDs. Others were guided to select equal proportions of male and female DDs. Out of the four districts visited, Kamuli district selected mostly male DDs; the other three had mostly female DDs. The national guidelines, which are expected to be followed, give prominence to women but also to literate people. The latter criterion largely affected women in Kamuli district. In the early districts where HBMF was implemented, men were mostly selected as DDs (especially because of literacy)

"….It is because men could even walk or ride long distances to collect the drugs. The men also could possibly be permanent settlers yet the women can easily be chased away. We also considered the level of education of an individual. For our community, this excluded almost all the women" (FGD Balawoli Kawaga Men LC1 Butalege Balawuli Subcounty, Kamuli District)

"….Mostly men work here as drug distributors. The women who have gone to school are very few doing this work. Initially the trainers preferred women but later that wasn't possible" (FGD Drug Distributors, Kawaga Butalaga LC1 Balawuli Subcounty, Kamuli District)

After some time it was learned by implementers that women were better "volunteers" because they didn't expect so much, (Rukungiri), and this was subsequently emphasized in the selection and training of DDs.

The three other districts visited had no problem following the Guidelines in selecting women as DDs. In cases where some men DDs were selected, communities were convinced that such men would be available at home most of the time, were humane and motivated to serve their communities. Study participants recalled that men were generally reluctant to take up the responsibility that was largely voluntary work and to them wastage of time. In one of the discussions with adult male heads of households in Bihanga Sub County, Bushenyi District, participants reported that, on learning that DDs' work was voluntary, many refused to offer their service, citing absence of monetary benefits.

In communities where men offered to be selected, their candidature was strictly scrutinized. Drinking alcohol was one major concern that disqualified them:

"….Mostly people preferred mothers. …… men go for alcohol and spend the whole day there. Such men can give an overdose and are never at home……,

but women are kind" (FGD Drug Distributors, Buhunga Sub county, Rukungiri District)

"….Men would participate but alcohol has destroyed them. All they want to do is to take alcohol " (laughter) (FGD VHT members, Amach Sub-county, Lira District).

"…… Men are always drinking so you cannot trust them with the drugs. Women are always aware about sicknesses" (FGD adult male household members, Amach Sub-county, Lira District)

Community fears against male DDs are not entirely unfounded; challenges are evident in villages without female DDs. In some communities with only male DDs, mothers are reluctant to go for services, especially at night. Mothers with sick children find it easier to knock at houses of female DDs at night for Homapak. Due to this fear, the women in Barokwok village in Amach Sub-county Lira District where the two DDs/VHTs in the village are male, cross to Akuli, a neighbouring village, where they feel more comfortable with fellow women.

5.1.3 Training of DDs

The training aspect in HBMF is outlined clearly in the MoH guidelines that serve as reference in the implementation of the program. It is recommended that a team of national facilitators should train district trainers selected from the DHT, HSD and Sub-county. These district trainers should be the existing trainers for IMCI and malaria. When selecting trainers both men and women should be involved to make both sexes DDs feel comfortable during the training. It is also recommended that a course of 30 – 35 participants should have at least three trainers.

Observations which the research team made in the field showed instances where the recommended procedures for training of DDs were not strictly adhered to, for instance, the numbers in a training session were well above the recommended.

In Bushenyi District the research team observed some training sessions for new DDs. The training duration was *insufficient*, as well as class size, training methods, and materials. In one centre, the entire training exercise lasted only three and a half hours instead of the specified 2 days. 220 new DDs were all in one classroom, with only two facilitators; making it impossible to utilize the full range of recommended training methodologies. Flipcharts and other job aids were not provided. Fortunately, remedial action was taken following the review to ensure that new DDs were given emergency follow-up training and materials.

Figure 1: A Training Session for DDs in Bushenyi

Participants attending a training session for DDs

During the training sessions, the guidelines state that the facilitator assembles and makes available a number of materials including the following:

- Training guidelines
- A notebook or exercise book and a pen for each distributor
- Flip chart(s) and Markers
- A sample of pre-packs of the drugs to be used
- Registers and free treatment recording forms
- A set of job aids (flipchart)

The training is recommended to last two days and cover the following topics:

- Malaria, its importance, causes, signs, treatment, and prevention
- Overview of the home-based management of fever strategy
- Roles of a drug distributor
- Recognition of a child with fever
- What to do for a child with fever
- Practical session at a health unit
- Determining which pack to give
- What to tell the mother/caretaker
- Recording the treatment
- How to keep drugs

It is also recommended that the following learning methods be used:

- Small group discussions
- Role-play where there are no patients

- Demonstration and return demonstrations
- Modified lecture

In most instances, DDs have been trained for two days as recommended while VHTs were trained for five days. However, in a some situations, the training was reported to have taken shorter period, as outlined above.

Some community members felt that DDs needed regular training and refresher programs to enhance their competence.

> *"….The training wasn't sufficient. The issue of human health to be handled by a person trained only for 2 days is rather risky yet a doctor studies for five years. So there is need for refresher courses"* (FGD Balawoli Sub-County Local Council Leaders, Kamuli District)

Some DDs expressed the need for regular refresher training to sharpen their skills considering that their tasks include;

- Identifying children who need to be referred to health facilities
- Advising the caretakers on the need to comply with referrals.
- Educating members of households particularly mothers, on the need for prompt treatment and compliance.

This kind of work, including follow-ups of the treated children, calls for polished interpersonal and educational skills, counseling and guidance, diagnosis and behavioural change communication.

Most reassuring is the fact that communities have not registered grave challenges arising from errors of omission or commission on the side of DDs. One study participant in Kamuli district made the following statement in support of DDs:

The DDs are well trained even when you call someone from the garden, they come and wash their hands first, and then give the drugs. The standards have not been very bad but if possible more training should be given to them. What I feel is that they are well trained and what I know is that the drugs are very strong but we haven't had any case of overdose given by DDs

From all the FGDs it was clear that an overwhelming majority of DDs in the intervention districts were adhering to treatment regimens. The program, however, needs to find avenues for regular refresher training of DDs to ensure continued quality of the services they render.

There is need for regular refresher training, and the use of quarterly meetings to supervise DDs and update their skills.

5.1.4 Tools

In order to perform the role of a community DD effectively, a number of tools are necessary, some of them hardly outlined in the Manual for HBMF. Officially, it is recommended that to be able to start activities immediately, arrangements should be made that after the training each distributor goes home with the following items:

- A set of job aids / flipchart
- A register
- A pen
- Enough packs of drugs to last for at least 1 month

At the Bushenyi training session, pens, Homapaks, and improvised registers were given out.

Though not explicitly stated in the Guidelines for HBMF, it was expected that communities themselves would provide some of the tools as part of their contribution to HBMF. District officials have emphasized that lower level Local Governments such as sub-counties and village LC1s can put aside money to meet a few basic requirements to facilitate the work of DDs. Except in isolated LCs, this has not happened.
"I improvised and got myself a wooden box in which I store the drugs. I have a problem (another participant interjected*), my cell didn't make me a container they had promised….* " (FGD Drug Distributors, Buhunga Sub-county, Rukungiri District)

Lack of coordination and standardization of tools provided to DDs in the country, sometimes in the same district, poses a serious challenge. In efforts to support the HBMF program, partner agencies such as Plan International in Kamuli district have offered bicycles to DDs in their program areas. In Kanungu district AFRICARE was giving bicycles to DDs in a subcounty next to Rukungiri district and this is already causing concern. In all the districts visited during this review, passionate appeals for support were made by the DDs.

> *We have also heard that DDs in Luwero were given bicycles and that has caught people's attention wondering what is wrong with our district. Why not give us bicycles too!*
> *There are cases where someone has to walk 18 miles… without a bicycle is rather difficult. At least the coordinator should be given one… some transport.*
> *The approach of Plan International is good; we selected 2 people and 1 bicycle was given to each zone to cover the area. If a bicycle is provided, then the DD should be able to monitor patients. Our zones cover large expanses of land.*
> *DDs normally suggest that the patients be referred to a higher level. The bicycle could be used as a village ambulance as well*

The idea to have one bicycle per parish sounds reasonable. In areas where Parish Coordinators have been selected among DDs, as in Rukungiri, improvements in records and stock management are evident. The Parish Coordinators move in the parish, collect registers and reports from DDs and submit them to the Health Unit. This saves time and costs of individual reporting and collection of Homapak from the Unit. All DDs would then gather during their regular quarterly meetings to share experiences and receive further guidance and support.

5.1.5 Incentives to DDs

The question of incentives to DDs is quite contentious. Throughout the HBMF review exercise, the need to provide incentives to enhance the work of community volunteers dominated most discussions and interviews. Although at national level the issue of incentives was guarded, at district and lower levels, stakeholders share one view, namely that DDs should be given incentives. The nature and amount of incentive, mode of delivery and source of the incentive items are the most contentious issues.

At the inception of HBMF, the role of the community was stipulated to include selection of distributors, collection of drugs from the health facility, and motivation of drug distributors. Communities have not met the last two; no arrangements are in place to collect drugs from Health Units by the communities themselves and no incentives have been offered to DDs as community input to the program. There is little evidence on the ground to show that someone has made a follow-up on these commitments. In most discussions, both men and women in villages were learning, as the research team asked questions, that their local contribution as beneficiaries of HBMF was important. The message that DDs are volunteers had been loud and clear from the onset, and communities and the leadership (village, parish, sub-county) had not thought about incentives. Many think that Government, in some way caters for DDs.

The DDs themselves are grumbling; they know that theirs is voluntary work but expect some token of appreciation from those that gave them the responsibility.

> *"….At the time we were selected to become DDs we were told to go on humanitarian ground; there is nothing, we were warned….. You reach there and get trained and serve for the sake of your village"* (FGD Drug Distributors Bihanga Sub County, Mburamizi Village, Bushenyi District)

Since the HBMF program was initiated from above, the general perception even among community leaders is that Government would perhaps provide payment. After discussion with the research team, the leaders seemed to have realized that they too have a role to play to motivate the DDs. Lack of incentives is slowly breeding discontent and inactive DDs in villages.

Some of the DDs openly expressed their discomfort and associated this with the low morale that is steadily creeping in their work. In Rukungiri district, participants narrated how community volunteers who got work that earned them money however meager, would rather do such work since there is almost no appreciation of their role as DDs. Mothers who take their children to DDs for treatment are beginning to experience the impact of such dissatisfaction:

> *"….We have been going to them* (DDs); *to encourage them but they would say that they are tired"* (FGD Kawaga mothers of children under 5, Butalage LC 1, Balawuli Sub-county, Kamuli District)

For some community members the research team talked to, the issue of incentives should not arise because several other people are doing voluntary activities for the benefit of their people. For instance for water and sanitation, local governance, infectious diseases prevention and control, roads maintenance, etc. DDs should not be the only volunteers in the village, it was argued:

"….But you see even the Chairman who works has never seen even 50/=, then how about those ones distributing drugs? When they were trained, they were told there was no money. So they work for free just like all of us" (FGD Adult Male Household Members Kagarama Village Buhunga Sub-county Rukungiri District

The voices of the DDs and other study participants during this review clearly underscore the need to rethink the HBMF strategy with a view to including incentives to DDs in the design and implementation of the program.

"….We really deserve something like money and we do not want to give a definite amount…may be an allowance…or an incentive [Kalya mukozi tikasala]" (a token consumed by a worker cannot hurt) (FGD Drug Distributors, Kawaga Butalaga LC1 Balawoli Subcounty, Kamuli District)

The views expressed by members of the VHT in Lira district summarize the perceptions and position of community volunteers in HBMF:

If Local Council leaders are given bicycles, what about us? The bicycles should at least be given to enable us to take our monthly reports, do monitoring and other duties. T-shirts for easy identification should also be printed and given to us. Umbrellas should also be provided to us especially during this rainy season… mosquito nets should also be provided. We talk about malaria being prevented by sleeping under a mosquito net and yet we don't have one

Part of the problem emanates from the false promises that have been given to DDs since the inception of the program. Technical and political leaders have promised various items to DDs but never make good their promises.

"….The expectations of DDs have not been met…the problem is the community development assistant (CDA), who promised that bicycles would be bought for DDs…..this brought competition…people wanted to be DDs. Up to now no bicycle has come" (FGD Balawoli Sub-County Local Council Leaders, Kamuli District.)

"….We know we are volunteers, but those people had promised to give us at least uniforms. We don't know what happened to them but we are still waiting for them" (FGD Drug Distributors, Buhunga Sub-county, Rukungiri District)

"….I think, there is some example we can borrow from the safe motherhood program, for instance the caps they had, and T. shirts… people used to call such volunteers doctors and that made them feel good. It is vital for the DDs to be given something to show that they are important" (FGD Balawoli Sub-county Local Council Leaders, Kamuli District.)

The contentions above call for a systematic program to remind all actors how they can provide appreciation to DDs. The communities have high expectations from their local volunteers including follow-up of malaria cases handled, referrals, education and communication. These activities cannot be effectively handled as voluntary activities since some have cost implications.

There is consensus at all levels that quarterly review and planning meetings be supported to take place for DDs and community resource persons to meet, share knowledge and experiences, interact with health workers/supervisors. This can also be used as an opportunity to motivate DDs with whatever districts and communities can afford and can also be used as a forum for refresher training of DDs.

5.1.6 Retention/Drop-out

Retention of DDs is one of the common challenges facing the HBMF program. There are marked numbers of DDs in almost every Parish that have clearly dropped out or have simply remained inactive for a considerable period of time. Cases of drop-outs are identified when DDs fail to submit their reports three times or more, consecutively. Those who miss two consecutive quarterly meetings are also declared drop-outs. The greater challenge is posed by DDs that remain inactive but never declare their resignation. Community leaders are instrumental in reporting inactive DDs that should be replaced. Drop out rates are estimated to range between 20 to 40 percent per year. This is based on the HSD/District monthly returns that specify the proportion of DDs reporting/supervised per month. Replacements are re-trained by the Health Unit in-charge. The HBMF evaluation survey and Mukono stakeholders report show varied levels of dropout or inactive DDs in each of the districts. This cannot be taken to represent the entire country. Since replacements are made for cases that have been confirmed, only scattered information about drop out rates was available at the time of the study.

> *"….Some DDs are inactive and others have become dormant but we are still working. I know someone who dropped out. When I asked why, she said she gets nothing so she would rather stay in her garden and dig"* (FGD Drug Distributors, Buhunga Sub-county, Rukungiri District

Asked whether the DDs in their respective villages or zones were still active, the following responses were typical of community members:

Respondent 1: In my parish, they were 16; only 11 have remained after 2 years.
Respondent 6: All are still working.
Respondent 2: One left and she was replaced.
Respondent 7: The one we selected was married and she is now divorced, so she left our village.
Respondent 3: Our DD dropped out because she wasn't receiving any benefit so she gave up

Whereas there are cases of inactive DDs or dropouts occasioned by migration and natural calamities, most cases of inactive DDs are simply a result of low morale, emanating from unfulfilled expectations.

During a stakeholders' workshop to share district experiences on HBMF, it was suggested that districts should strengthen the monitoring systems to detect early those who drop out and put in place a mechanism of continuous training for replacements at health facility level. Districts should build capacity at every health facility to carry out tailor-made training for new entrants.

It has been suggested earlier (DDs' motivation) to include recognition of the DDs at public gatherings, and to accord them preferential treatment for different services. It has also been suggested that, community resource persons including DDs should be selected for other community-based heath activities which often come with incentives. In addition, non-monetary incentives such as T-shirts,certificates of recognition, and exemption from other community services should be considered as incentives for DDs. It was proposed that each district should determine its best means of motivating the DDs.

In all this, it is important to empower health units handling HBMF in their catchment areas to take responsibility for activities including monitoring dropouts, refresher courses for DDs/CORPs and supervision.

5.1.7 Community Participation and Involvement

Communities have a great potential for playing an active role in malaria control especially if the interventions stimulate and empower them as partners in the process rather than mere beneficiaries (Root *et al.,* 2003).

In practice, community participation has been limited to selection of DDs and in utilization of services of DDs. Many communities visited during this review expressed inability to provide support, partly as this would open new demands of payment from other community volunteers. There are a number of other people providing services as self-motivated volunteers. Secondly there are grave concerns that vulnerable people who constitute the majority in many communities may be turned away, having failed to contribute material items to support HBMF. There are quite a number of activities in almost every village requiring people to provide contributions, ranging from church offertories to building materials for a school or other social service. People feel they are overwhelmed. Other people assume somebody (institution, Government department or NGO) must be supporting HBMF.

> *"….They usually call them for workshops, don't they give them something? For me I think they get an allowance"* (FGD Adult Male Household Members Kagarama Village Buhunga Sub County Rukungiri District)

There has not been much information and education for the local people about the nature and dynamics of HBMF. This is evident from the type of misconceptions regarding the program especially on aspects related to work remuneration. Mothers of children under 5 in Kamuli study sites thought that since the government had sent the drugs, the DDs could also have been paid by the government.

Overall, the community brings children for treatment, follows instructions as given by DDs and provides general care for the sick children. In a few cases, they link with the local leadership to monitor the work of DDs and report cases of drop-outs or inactive DDs. They also participate in the selection of members to replace drop outs. Participants in Rukungiri District narrated how the best way their communities participate is to tell the DD "*my child was about to die but you saved her, thank you*".

In a rather sarcastic tone, one of the community leaders in Kamuli District summarized community involvement thus:

> *"….The work of the community is to take the children for treatment and to continue producing many children to enable the program to continue"* (laughter from participants in FGD)

In Lira District where the VHT concept has grown roots, communities have been mobilized and sensitized to play more roles in matters related to community health. and support to volunteers. This does not necessarily apply to monetary contributions, but other relevant forms including appreciation of work of volunteers. Community members are expected to respond to calls for meetings, to learn and plan for the better health of members, both young and old. The VHT experience in implementing districts is still at its prime stage. At this stage not many conclusions can be drawn, on the effect of this approach on community participation and CORPs motivation.

> *"….The role of the community is that they are working together with us, the other work is that when we give the first dose of the drug, it's the role of the community to continue using the drug as prescribed by us. Their other role is to bring their children to us for treatment. They also monitor us whether we are working"* (FGD VHT members, Amach Sub-county, Lira District)

During the discussions held as part of this review, people were quick to reflect on their potential to make some input to the program. For instance, Sub-counties retain 65% of locally generated revenue while Local Councils 1 receives 25%. A portion from such monies could be committed to HBMF activities in each community. The mood of the community and their potential to play a more active role can be picked up from the tone and pledges members make during the discussions:

> *"….I think we could contribute some money as a community and put it together such that it can be divided among the DDs. We shall sit since you have brought it up such that we make some contribution. But initially we thought that their pay will come from the Government"* (FGD Kawaga mothers of children under 5, Butalage LC 1, Balawuli Sub-county, Kamuli District)

> *"….We shall sit and see what to do because today we have a council meeting. May be next week we shall call the DDs and talk to them"* (FGD Community Leaders Buhunga Sub County Rukungiri District)

It is a key conclusion from this review that community leadership can be stimulated and needs to be regularly reminded to discuss matters related to HBMF and particularly the need and modalities for local contribution.

The local council leaders of Balawoli Sub-County, Kamuli District were more unequivocal on this matter as reported below:

Respondent 1: We shall make sure that there shall be boxes for safe storage.
Respondent 5: We shall also make sign posts.
Respondent 7: The spoons also are necessary for serving drugs.
Respondent 1: As a community we shall sit and find out from the DD what they need and what challenges they face such that we can see what we can do.
Respondent 3: There is somewhere, where they brought a patient and the DD couldn't even find a pen to take a statement from the patient. So the community should be able to buy some of those things.

5.1.8 Integration

In many communities, various cadres of CORPs exist. These include the Community Distributors of Directly Observed Treatment for TB (DOT), distributors of condoms and other reproductive health materials, Red Cross volunteers and the Global Alliance for Vaccines and Immunisations (GAVI) mobilizers (Root *et al.,* 2003). However, despite having the same target populations, these structures have operated with little synergy and coordination. This is the rationale behind the idea of instituting VHTs as opposed to DDs per se. Experience in Lira District shows that this is a more appropriate way of providing services in communities with multiple health challenges that require the input of community volunteers. The case of Amach Sub-county already described in this report provides a typical example of successful integration.

This review confirms Root's conclusion that to have a greater impact of the various interventions, it is imperative to use (where appropriate) community structures that involve these individuals in the provision of multiple health services. This is important as it avoids the duplication of efforts by CORPS.

District and national level stakeholders (report of Mukono workshop to share experiences of HBMF, 2003) observed that programs have engaged communities in a divided manner. It was observed that the VHT concept is an opportunity of bringing all community resource persons together at the village level. However, current funding modalities may hinder integration since each partner has a different criteria and guidelines, as well as priority areas for support. Capacity for integration needs to be built at district and lower levels both in terms of training and resources. The way forward is to institutionalize basket funding at district level or to allow for flexibility in the use of funds districts receive from different programs and donors to foster integration.

The DDs interviewed during this review are looking forward to integrated service since this means expanded scope of service on their part, and perhaps a little incentive to them, if merged with programs like nutrition, immunization or community IEC for safe water and sanitation, which may offer incentives.

> *"….Since the Government cannot pay us, some other programs like vaccination should be given to us to implement and then we get paid for that…we could take on such community health activities which bring incentives"* (FGD Drug Distributors, Kawaga Butalaga LC1 Balawuli Subcounty, Kamuli District)

This study concludes, as others have that using existing structures (such as having multiple roles for volunteers) makes it easier to institute motivational actions.

Given the nature and magnitude of health concerns in communities (water, sanitation, malaria, diarrhea, immunization, nutrition, information and education, reproductive health, environment etc) it would be a good idea to embrace the VHT concept. This has implications for their selection, as it is important to work with communities that are able to grasp the basics related to health. Some background education must be emphasized. It is not simply willingness to volunteer or one's level of interaction, social attitude and availability in community etc... Such people are eligible to take on VHT work may not be easily obtained in every community. Quite many communities do not have the kind of people, reasonably educated and trainable to become VHT members. The case of Kamuli is quite vivid; majority of DDs for HOMAPACK are men because fewer women met the criteria. The VHT concept would ideally put the qualifying mark a little higher. It is the considered opinion here that VHTs could be used more widely though selectively, taking into account the capacities of each community. Such a program could also be linked with other sectoral programs such as Functional Adult Literacy (FAL) program under the Ministry of Gender, Labour and Social Development so as to give opportunity to potential VHT members raise their literacy and communication skills.

5.1.9 Alternative approaches/Innovative systems

Some of the districts visited during the review have developed ideas and actions that may variously be described as improvements to the HBMF approach stipulated in the national guidelines. For instance, Rukungiri District has registered delays in submission of reports and registers of Homapak from distant DDs. These have been handled by instituting Parish Coordinators. In each Parish DDs nominate their supervisor. The Parish Coordinator takes responsibility to act as a channel of communication between the DDs in the parish and the nearest Health Unit. This way, the challenges previously associated with cost of travel, inconvenience at the Health Unit dealing with tens of DDs and time wastage are addressed. The Parish coordinator collects the required amounts of Homapak for distribution throughout the parish. In-charges of Health Units gladly revealed to the research team that this has tremendously improved the regularity and accuracy of the reporting function under HBMF, as parish coordinators help the weak DDs in filling the registers.

Cases of inactive DDs are quickly brought to the attention of the Health Unit and replacements arranged. The innovation also reduces the number of reports to the Health Units since one report per parish is compiled as opposed to heaps of reports from every DD. Using this approach, day-to-day challenges are shared with the Coordinators while more critical needs are addressed during quarterly meetings attended by all DDs at their control Health Unit. It is suggested that such an approach be adopted elsewhere for effective service delivery.

Rukungiri district has been able to replace inactive DDs and train other community volunteers to take up the task. Attempts have been made to integrate HBMF in the district health system rather than manage the program as a parallel arrangement:

The district is using PHC funds to facilitate supervision of DDs and continuous training of DDs to replace those dropping out. To strengthen commitment of health workers to the program, the number of DDs supervised, completeness and timeliness of DDs' reports have been included as expected outputs of health workers to be taken into account as part of the Results Oriented Management approach for staff performance appraisal.

Decentralization and empowering of health units to take responsibility for HBM activities in their areas of responsibility are key factors that contributed to the success of implementation in the district. Funds for training DDs were sent to health facilities that arranged for the trainings (*Report on District Experiences with HBMF held in Mukono, 2003*).

5.1.10 Alternative Treatment Sources

The review probed opportunities and challenges of alternative sources for treatment and care for children with malaria available in and around communities. Previous studies have shown that wider access in areas where the Homapak is being distributed can be enhanced through strategically selecting community distributors in villages which are further from, or under-served by, health facilities (Root *et al.,*2003). The common view is that households and families closer to health facilities may under-utilise the health services of DDs in preference for health units. From this review it was noted that other considerations apart from physical proximity to the health facility may compel caretakers to seek services from alternative sources. Chronic insensitivity of health workers at Health Units continues to discourage clients. Some clients have found relief in DDs:

> *"….Sometimes you reach when the medical doctors are not present and you sit for the whole day without any service. If you take a child at 6 pm they ask you what you have been doing. They do not work or attend to you on Sunday even when the child is severely sick"* (FGD Kawaga mothers of children under 5, Butalage LC 1, Balawuli Sub county, Kamuli District.

> *"….The drug distributors also give drugs there and then, when we take our children as compared to health centres where you have to line up for hours in order to get the drugs. The DDs do not ask for books but just register us in their books"* (Mothers of children under 5 years Barokwok Village, Amach Sub-county Lira District).

For management of fever in children, drug shops and markets have undoubtedly lost business. First drug shops attach a cost that may not be affordable at the particular moment health services are needed. Study participants also explained the difficulties in accessing drugs at night from drug stores. Such stores located in trading centers or in crowded communities in the rural areas. The majority of households in an average village may not access similar services that easily as they do with DDs.

An earlier report (Basics II project 2004) showed how Kumi District with the highest reported use of Homapak drug distributors had the lowest reported use of drug shops/stores/pharmacies. Equally, the district with the lowest use of Homapak DDs in the Basics II project 2004 (Kamuli) had the highest use of the drug shop/store/pharmacy as tsource of care for children's fever. Although the researchers

were reluctant to determine and conclude on the nature and extent of the shift, the present review also shows that DDs serve as a substitute source of treatment, except for severe cases of malaria.

> *"….Previously we were buying from drug shops whose owners we are not sure whether they are trained. But for the DDs we know that they are trained… so we trust them"* (FGD Balawoli Kawaga Men LC1 Butalege Balawuli Subcounty, Kamuli District)

In Bushenyi communities are excited about the DD strategy for management of fever. Even before they utilize the service (DDs were undergoing training at the time the research team visited), people have no kind words for the Health Units:

> *"….We have a problem because your child gets sick and you take them to the hospital immediately then the health workers will ask you where you have been all this time. They tell you they are coming and your child also eventually gets convulsions and you find yourself carrying a dead body"* (FGD Adult Men (Heads of Households) Bihanga Sub County, Mburamizi Village, Bushenyi District)

> *"….I have evidence at that hospital, I went there at 2.00pm with my child who was terribly sick and they didn't want to see me. They told me to see this nurse in-charge. I walked to the in-charge who told me not to disturb him …., that it wasn't yet his time"* (FGD Mothers of Children Under 5 Bihanga Sub County, Mburamizi Village, Bushenyi District)

For management of uncomplicated malaria, the relative advantage of HBMF is unrivalled.

5.2 Drug Supply and Improving Delivery Mechanisms

5.2.1 How the drug supply system for Homapak operates.

The diagram below shows the drug supply system flow for Homapak:

Kampala Pharmaceutical Industries
↓
National Medical Stores
↓
District Drug Stores
↓
Health Sub-district Drug Stores
↓
Health Centre III & II Stores
↓
Drug Distributors

Presently there are two systems operating in the districts:

A. The 'Pull' system - where districts request drugs, based on information from the Health Management Information System (HMIS). The following methods of drug procurement fall under this system:

a. The PHC Grant

Under the PHC grant it is directed that 50% of the grant is spent on purchase of drugs. Districts have freedom to prioritise the list of drugs they would like to purchase. None of districts visited were using this grant for the purchase of Homapak, because it is not on the essential drug list and does not therefore appear on their drug list. Information from the Pharmacy Department of MOH however said there was provision on the ordering form for districts to include drugs that were considered as very important to the district. There is therefore an information gap between the districts and MOH. Districts were only aware of the central MOH budget for Homapak under Global Fund. It is estimated that the Homapak purchased through the Global Fund will last up to end of 2006, at which time a new antimalarial drug policy for Uganda will have been effected.

b. The Credit System

The credit scheme allows districts to purchase drugs on the essential drugs list from National Medical Stores (NMS) on credit. The requisition form however gives some degree of flexibility where other drugs not on the essential drugs list can be purchased. Under this scheme Homapak, which is not on the list, can also be purchased by districts.

B. The Push System - where MoH and donors send drugs to the district according to perceived needs.

When the HBMF program was introduced in the pilot districts there were no data on which to base quantification when ordering Homapak. The NMCP based its estimates on the district census figures and the assumption that 20% of the population is under 5 years and that each child in this age range is expected to get a malaria episode 0.5 times a month. It was also estimated that 40% of doses will be for the 2 months up to 2 years and 60% would be for 2 years to 5 years. The first Homapak consignments to the implementing districts were all therefore calculated on this basis, and a Push system was used. Subsequently a few districts have started basing their Homapak requirements on information from the HMIS. With the poor DDs reporting rate (average of about 30%) observed in the districts visited the pull system is unlikely to produce reasonable district Homapak requirement estimates. Based on consumption, the ratio was revised to 50:50 red and green.

Findings at Kampala Pharmaceutical Industries (KPI)

KPI confirmed that they have the capacity to produce enough Homapak to meet national needs. KPI's problem is uncoordinated Homapak orders that make it difficult for them to set their production lines in a way that will ensure that both red and green Homapak are available to their customers.

Findings at NMS

Because of time constraint, the review team did not physically visit the NMS (which they considered important) to assess storage and expiry dates. Information was only collected from an NMS official. At the NMS Homapak is handled as a third party product (kept on behalf of the client with NMS only handling the storage and distribution). This means that no donor Homapak can be distributed to any other district without the authority of the purchasing donor. It also means that districts without supporting donors can only receive Homapak from the MOH or through purchase with their PHC funds. Information from the NMS revealed that the credit line scheme cannot be used for purchasing Homapak because it is not on the

essential drugs list (this again contradicts the information from the MOH). NMS started handing Homapak in 2002 when WHO initiated the HBMF program in ten pilot districts. Other partners took on other districts (Malaria Consortium 3 districts, African Development Bank 11 districts). Homapak procured by WHO ran out and there were no stocks until the MoH procured more in 2003, and distributed to 12 districts which included the 10 pilot(s). Since the start of the pilot sites a number of donors have come on board and are purchasing Homapak for different districts.The table below gives a list of donors involved in Homapak distribution to districts:

Table 2: Donors Involved in Homapak Distribution

Donor	Districts Covered	Type of System
Global Fund	All 56 districts of Uganda	Push but hoping to move to pull
DFID	Masaka, Kumi, Rukungiri,Pader, Tororo, Mpigi, Sironko, Masindi, Rakai, Bugiri	Pull
MoH	Kabarole, Kamuli, Kanungu, Kasese, Kiboga, Kiyenjojo, Nakasongola, Sembabule, Soroti, Ajumani, Apach, Bugiri, Kamwenge, Kiboga, Kamuli, Kabarole, Kumi, Kyenjojo, Mbale, Masindi, Nakasongola, Rakai, Rukungiri, Sironko, Tororo, Wakiso	Pull and push
SHSSPP	Apac, Katakwi, Soroti, Arua, Lira, Kaberamaido, Nebi, Ajumani, Moyo, Yumbe, Kapchorwa	Pull
UPHOLD	Arua, Pallisa, Gulu, Yumbe, Mayuge, Mbarara, Bushenyi, Rukungiri, Bugiri, Kamuli, Bundibugyo, Kyenjojo, Lira, Katakwi, Nakapiripirit, Wakiso, Luwero, Mubende, Rakai	Pull

The supply of Homapak to districts has depended on donor estimates using the MOH guidelines. Some donors have used the pull system while others have used the push system as shown above. The pull system used has consisted of districts requesting for Homapak based on population estimates rather than disease returns.

In 2003 there was a stockout of red Homapak and the reason given was the way KPI organised its production line. This anomaly was, however, rectified.

NMS currently has enough buffer stock to prevent any Homapak stockouts. The available stocks at the NMS would meet national demands up to December 2005.

A number of challenges were reported to the NMS and include:

1. Homapak is very bulky to transport and cannot be transported with other district essential drug deliveries. Special lorries have to be used for deliveries. This has often caused delays in the delivery of Homapak.

2. Some of the districts have more than one donor, and this results in some being over-stocked while others with no donors are under-stocked.

3. Sometimes the MOH gives out notices to districts informing them that they have Homapak at the NMS, yet NMS has neither received consignments nor communication regarding the deliveries.

4. Long procurement cycle that sometimes delays Homapak deliveries

5.2.2 Findings in the Districts visited

District Level

All the districts visited had adequate supplies of Homapak at the district stores and were not envisaging stock outs. It was, however, found that some of them (Rukungiri and Kamuli) had in the past experienced one or two stockouts, which they attributed to a delay in the delivery from the NMS. In Kamuli there were stocks in the district stores that had not been delivered to Health units because of lack of transport. The bulkiness of the Homapak was cited as the reason why it could not be transported with other essential drugs. The districts said that they did not have fuel to carry out special deliveries for Homapak.

All districts visited had adequate and appropriate storage facilities and had no problems with the record keeping. There was, however, concern over the shelf life of Homapak that was seen as too short to support the existing purchases and supply systems.

In Bushenyi District the District Drug Inspector (DADI) showed concern that he was not involved in the Homapak supply chain. The DADI was not aware of the order, receipt and distribution of Homapak even though the drug was kept in his store. He said that the Homapak issues were dealt with by the district Cold Chain Technician. Similar concerns were raised by the district storekeeper. The DADI was of the opinion that Homapak should be subjected to all the procedures that other drugs going into the district are subjected to, in accordance with the National Drug Authority (NDA) regulations. He was of the opinion that the store keeper should be responsible for the Homapak receiving, storing and distribution in the district. This complaint was not registered in the other districts visited.

A mixture of the pull and push systems was operational in the districts visited. This was a result of the multiple donor effect existing in some of the districts. The PHC fund was found to be too small to cater for Homapak supplies and at its present level cannot be thought of as an alternative to donor funding for Homapak. The credit line is not being used to restock districts because Homapak is not on the essential drugs list.

Sub District Level

Apart from Rukungiri District (visited Rujumbura Health Sub-District) none of the other Districts visited were using Health Sub-districts to store and distribute Homapak. A number of reasons were given and these include:

1. Lack of proper storage facilities

2. Lack of transport facilities to transport the drugs to the lower health units

3. Drugs were supplied to HC3 and 2 directly from the district stores.

Health Centre III and Health Centre II

Apart from Kamuli District all the participating HCs had enough supplies of Homapak to last them till the next deliveries (usually an average of three month intervals). There was evidence that the drugs were well stored and the stores keeping practices were within prescribed standards. Some units reported that their stores were being

overcrowded with Homapak and expressed fear at what will happen when districts have money to buy more drugs. It was however noted that some HC2 were not participating especially those that are not government owned. This was considered a great anomaly because the policy is for all health units (public or private) to participate in HBMF activities; training, supervision, Homapak storage and distribution. The problem seemed to have arisen from the HBMF initial district sensitization.

Supervision of the drug stores at health units by the DADI was noted to be very limited in the districts visited. Supervision by the district storekeeper to the health units was also very limited (Bushenyi) or irregular and not well focused on ensuring good record keeping, good drug storage and stocks inventory.

In Kamuli Districts many HC III and II had no Homapak supplies, even though the district had large quantities that were about to expire, lying in the district stores. HBMF activities in these units were almost at a standstill.

It was noted that health units were not using Homapak to treat children, even when they had no other forms of treatment for malaria in children. The following were the reasons given:

1. Health workers were told that Homapak was to be distributed only by DDs

2. Health workers thought that the idea of filling HBMF drug registers was tedious

In Kamuli district there was a time when some health units had run out of chloroquine and children were simply told to go and buy the drugs from private practitioners, yet the units had piles of Homapak.

HCs are responsible for supplying DDs with Homapak. It was however noted that after the health workers have given the Homapak to the DDs, there was minimal or no follow up of the DDs to assess performance in terms of drug storage, wastage and appropriate distribution.

Community

From the focus group discussions it was clear that the DDs were conversant with the issues of drug doses, dosages and storage. At the initiation stages of HMBF activities in the districts, communities are sensitised on their roles and responsibilities. One of the responsibilities of the communities is to provide DDs with storage facilities. In all the districts visited communities had pledged to do this but not a single one had done so. DDs were improvising storage facilities which range from plastic bags to wooden boxes. A quick look at the compiled DDs records, in most districts less that 30% of the DDs are reporting regularly. With this level of reporting it is difficult to know what exactly happens to the drugs once they arrive in the village. Even for those that report there is little or no time for health workers to have a meaningful dialogue in form of support supervision.

At community level, DDs expressed concern that the size of the Homapak was causing concern to some of the mothers. These mothers find it difficult to comprehend how tablets of the same size and same number can be given to children of different age groups as the correct dose for malaria. This matter is further compounded by the recent introduction of adult Homapak. Strong IEC and BCC activities are needed to fill this information gap.

5.2.3 Second Line Drugs

All supervising units are supposed to act as referral points for the DDs. The review team found that sometimes the supervising units do not have oral quinine, which is the second line treatment for malaria. This greatly affects the HBMF program objective of establishing effective referral sites for the DDs to use.

5.2.4 Implication of the New Drug Policy

Discussions have already taken place and policy documents are in the process of changing the first line antimalarial drugs for Uganda, to a combination of artemether and lumefantrine (ART-LUM or Co-artem™). In the 2nd edition of HBMF implementation guidelines and 3rd edition of the management of uncomplicated malaria guidelines, which are nearing completion, Homapak has already been replaced with ART-LUM. It is anticipated that ART-LUM will be available in Uganda for use in public health facilities by January 2006. It is planned to limit ART-LUM to health facilities at first before making it available for use at community level. In the meantime research on ART-LUM at community level is planned, but global stock shortage of ART-LUM/Co-artem™ is causing a delay.

Stakeholders interviewed had the following concerns about this policy change:

1. Homapak is quickly becoming a household name and a change of drug might confuse the communities leading to reduced acceptability of the HBMF program

2. Owing to the world shortage of ART-LUM an alternative being considered is amodiaquine-sulfadoxine pyrimethamine. Amodiaquine has been used in Uganda for a long time and many people who have used it before complain of epigastric discomfort. This could easily lead to reduced usage and dosage adherence.

3. There are already many instances where chloroquine and SP have not been available in health units. Many health workers are wondering how an expensive drug like artemisinin derivatives can be constantly available when a cheaper one like SP was not.

4. The biggest issue raised was the ability for Novartis to maintain global supply of ART-LUM

Summary of Major Findings

1. Presently there are two systems operating in the districts regarding pharmaceuticals: a) the 'Pull' system where districts request for drugs using the PHC grant and the credit system and b) the Push system where MoH and donors send drugs to the district according to donor or MoH perceived needs.
2. KPI has the capacity to produce enough Homapak to meet national needs.
3. Uncoordinated Homapak orders make it difficult for KPI to set their production lines in a way that will ensure that both red and green Homapak are available to clients.
4. At the NMS no Homapak can be distributed to any other district without the authority of the purchasing donor.
5. The credit line and PHC scheme cannot be used for purchasing Homapak because it is not on the essential drugs list.

6. Since the start of the pilot sites a number of donors have come on board and are purchasing Homapak for different districts. They include, DFID, Global Fund, MOH, SHSSPP, USAID through UPHOLD and Development Cooperation Ireland (DCI).
7. The supply of Homapak to districts has been a mix of the pull and push system as shown above.
8. NMS currently has enough buffer stock (up to December 2005) to prevent any Homapak stock outs
9. NMS still has a number of challenges to improve Homapak delivery
10. All the districts visited had adequate supplies of Homapak at the district stores and were not envisaging stock outs.
11. In Kamuli there are stocks in the district stores that districts said could not be delivered to Health units because of lack of transport.
12. All districts visited had adequate and appropriate storage facilities and had no problems with the records keeping. Storekeeping practices were within prescribed standards There was however concern over the life span of Homapak that was seen as too short to support the existing purchases and supply systems.
13. In Bushenyi district the District Drug Inspector showed concern that he was not involved in the Homapak supply chain.
14. A mixture of the pull and push systems were operational in the districts visited.
15. Apart from Rukungiri District (visited Rujumbura Health Sub-District) none of the other Districts visited were using Health Sub-districts to store and distribute Homapak.
16. Apart from Kamuli District all the participating HCs had enough supplies of Homapak to last them until the next supplies arrive (usually within three month intervals).
17. Some HC2 were not participating especially those that are not government owned.
18. Supervision of the drug stores at health units by the DDI was non existent.
19. Health units were not using Homapak, even when they had no other forms of treatment for malaria in children.
20. After the health workers have dispatched Homapak to the DDs no monitoring regarding storage of the drug, resulting in wastage.
21. DDs were conversant with the issues of drug doses and storage.
22. DDs were improvising storage facilities ranging from plastic bags to wooden boxes.
23. In all districts less that 30% of the DDs are reporting regularly.
24. Through patient follow ups DDs reported that there is good compliance with Homapak. This information is subjective since there is no monitored indicator/s to confirm.
25. DDs expressed concern that the size of the Homapak tablets was causing concern to some of the mothers
26. Second line drugs are not always available at all supervising health units
27. The new drug policy has its own cost and supply problems

5.3 Support Supervision and Monitoring and Evaluation

5.3.1 Background

Review of existing literature and national reports indicate that there was very limited and irregular support supervision of drug distributors (DDs) in most of the districts implementing the HBMF program. This was in form of quarterly review

meetings for example in Gulu, Kitgum, Rukungiri and the SHSSPP-supported districts. The constraints responsible for this included lack of funds, poor staffing at health facilities and lack of clear guidelines on how to supervise DDs. Information from stakeholders (DDs, community leaders, health unit staff, district and sub-district staff) indicated that there was general agreement that supervision would improve the quality of services provided by the drug distributors. It was resolved that this supervision should aim at strengthening linkages between the DDs, existing community structures, and the formal health system.

Although community health services are an integral part of the national health care delivery system represented as HC1, the review team failed to identify clear guidelines on who should fund and supervise HC1. This lack of clarity has left the HC1 in a dilemma. They are not sure whether they should look to The Ministry of Health or to the Local Government for funding and supervision.

The HBMF implementation guidelines suggest the following 4 modes of DDs' supervision:

1. Supervision of DDs on a monthly basis or monthly supervision for at least the first three months followed by quarterly supervision in form of review meetings.

2. Interaction with DDs (e.g. whenever they come to collect medicines) to address issues such as record keeping.

3. Whenever health workers visit communities for activities such as immunization.

4. Quarterly supervision in the form of review meetings.

   The guidelines also indicate that DDs are to be supervised by the nearest health unit (ranging from HC2 to HC4)

5.3.2 The Review Team's findings on the suggested supervision modes:

1. <u>Supervision of a CDD on a monthly basis or monthly supervision for at least the first three months</u>

Districts visited by the review team agreed that this would be an effective way to improve DDs' performance. However no district visited was doing or hoping to do this kind of supervision for the following reasons:

a. On average HC2s have 10-20 DDs to supervise while HC3s have 50 – 100. Supervising all these would require increased resources in terms of money, time and personnel. Districts and sub-counties did not have these kinds of resources. With the introduction of VHTs the problem will be further compounded, because the numbers increase.

b. Considerable logistics in terms of transport and allowances are required as health workers move to the different communities. This form of logistical support is too expensive for districts or sub-counties to afford.

The review team observed that the UPHOLD-supported district plans for 2005/2006 have a component of individual supervision of DDs at least once in 3 months. The team also noted that the Global Fund has budgeted for HBMF activities. Most of the Global Fund money has been devoted to training, with very limited funds earmarked for supervision.

2. Interaction with DDs (e.g. whenever they come to collect medicines) to address issues such as record keeping and reporting.
   All the Districts visited by the research team, where the program had begun, were carrying out this type of supervision. It was, however, found that this type of supervision cannot meet the required objectives of HBMF supervision. The HBMF implementation guidelines spell out these to be:

   - To reinforce the skills of DDs for giving appropriate treatment and referral
   - To support the distributors in proper storage and quantification of medicines
   - To support the distributors in proper record keeping
   - To support the distributors in solving problems related to their role of medicine distribution
   - To ensure that medicine distributors stick to their expected roles and do not involve in malpractices
   - To promote community participation in the strategy

   It was found that this type of supervision had the following shortcomings:

   a. On the average less than 30% of the DDs, in the districts visited, were bringing reports and collecting drugs from their respective health units. MOH reports reveal similar figures in other districts in the country. This approach would therefore leave the majority of the DDs unsupervised.

   b. Not all the health unit staff were prepared (trained) to supervise the DDs. This, coupled with the big workload and gross understaffing at all health unit levels, makes this approach inappropriate on its own for effective DDs' supervision.

3. Whenever health workers visit communities for activities such as immunization, "no missed opportunity".
   This approach was found to be not feasible because the districts visited said that carrying out effective DDs' supervision is not easy during other community initiatives such as EPI and CDD outreaches. Supervision of community EPI & CDD initiatives was said to be intensive and that combining them with HBMF would be a big additional burden to the health workers.

4. Quarterly supervision meetings
   Quarterly supervision meetings were viewed as an appropriate means for DDs' supervision. The HBMF implementation guidelines suggest the following activities at these meetings:

   - Reinforce one or two key aspects of DDs' training e.g. identifying danger signs
   - Introduce any additional or new information to DDs e.g. mobilizing communities for immunization
   - Facilitate DDs to share experiences of their work including any problems, and how they solved them
   - Collect data from the DDs' Registers into the health facility Register
   - Supply DDs with Homapak/ART-LUM based on consumption levels in the previous months. Ensure that they get enough stocks for the next quarter.

   None of the districts visited were currently carrying out this supervision. Reasons for not doing so included:

   1. Inadequate or lack of funds. Quarterly meetings require funding for DDs' meals and transport reimbursement. Most districts visited said that the PHC grant is the only means of funding that would support this type of activity. It was however, noted that the PHC grant was small does not prioritize HBMF activities. Carrying out these meetings was however, viewed as a cheaper alternative to health workers, visiting individual DDs on a monthly basis.

   2. Many of the supervisors felt that they needed clear supervision guidelines/ tools for effective HBMF supervision. Most supervisors had the ability to carry out the technical supervision, but they lacked competence in other support supervision components (improving DDs' communication skills, issues of psycho-social support that would enhance the spirit of voluntarism and the ability to probe for problem identification). There was a general impression that many of these supervisors needed to be equipped with the above skills.

5.3.3 Observed/Reported Models of Supervision

In response to the challenges of supervision and collation of data from DDs, some districts had devised innovative ways of ensuring that DDs are properly supervised.

a. In Nakasongola, for instance, it was reported that the supervisor meets with DDs at an agreed place and time, every quarter, to share experiences and replenish drug stocks. This arrangement minimizes the need for DDs to travel long distances to health units. Using this arrangement the district has been able to supervise 74% of the DDs.

b. In Rukungiri District (Buhunga HC 3), the health worker in-charge has managed to improve his reporting by 50% through encouraging DDs to elect a parish supervisor. The role of the supervisor is to collect registers from DDs and take them to the supervising health centre on a monthly basis. The supervisor is then given a travel allowance of 2,000 shillings. The supervisor is also responsible for helping the DDs in the proper recording and replenishing their stocks of Homapak from the supervising unit. FGDs with DDs revealed that the DDs welcomed this approach and dispelled all fears that other DDs would not like the idea of a travel allowance for the parish supervisor.

c. In Rukungiri it was observed that many of the HCIIs were owned and run by faith-based organisations. The district had not involved these health units in HBMF activities. This had increased the burden on the HC3s. Lira had involved the private non profit health units in HBMF activities. Although Kamuli has a government health centre at almost every parish, many HC2s were not involved in DD supervision.

d. WHO is piloting two models for quarterly support supervision in 3 districts – Kiboga, Kumi and Nakasongola. The models will be piloted before scaling up to other districts:

- *Nakasongola/Kiboga Model:* Supervision will be at satellite sites in every parish. Where health centre 2 exists, it will serve as the supervising centre. In all cases the parish level will be the lowest level.

- *Kumi Model:* Supervision will take place at the sub-county level. A health worker from each health unit will participate at the sub-county meeting. During the meeting groups of parishes will be met together to allow for close interaction with the DDs.

In both cases LC1, and LC2 chairpersons or their representatives are facilitated to attend these supervision meetings.

Results from the pilot sites are still awaited. The research team discussed both of these models with the district teams visited. There was a general consensus that the Nakasongola model is good and can be implemented successfully. The model also has the advantage of linking HBMF activities to Parish Development issues and thus stands a better chance of being incorporated into the parish development plans. This would increase the chances of HBMF activities receiving funding from the Local Government (Sub-county). Under this model transformation from DDs to VHTs would be easier to achieve and sustain. The Kumi model was thought to have the disadvantage of not being able to directly link HBMF activities with other community activities at the parish level where community health activities are planned and budgeted for.

WHO also proposes Quarterly Supervisors' Meetings in addition to the DDs' quarterly meetings. Under this arrangement, different health unit supervisors will hold quarterly meetings at the Health Sub-district or district level to share their experiences and come up with solutions to obstacles identified in the implementation of the strategy. Discussions with supervisors in the district

revealed that this was thought to be a good idea and that these meetings could also be used to equip them with extra skills to improve the quality of the support supervision they are expected to provide.

Integrated Support Supervision

Reading from the various reports there is a strong push to have DDs' supervision integrated into the mainstream support supervision. It was however, found that this may not be possible considering the limited numbers of HWs, they may not be able to handle the numerous issues in the integrated supervision. There is need to recognize DDs' supervision as one of the key components of the district, health sub-district and health unit supervision.

5.3.4 HMBF Planning and Financing

The review team identified two different approaches in planning at the districts. There is a top - down planning approach used by the MoH and a bottom-up approach used by the Local Government. In the top-down approach the MoH gives districts guidelines on priority areas of funding and percentage distribution of the PHC grants in the priority areas. The same approach is applied in sub-counties. Districts and sub-counties then make operational plans to meet the given conditions. The amounts allocated to HBMF in most districts and sub-counties are very low and most of it ends up in training with very little, if any on supervision. In the bottom-up planning, parishes through the Parish Development Council where they exist and Parish Councils where they do not exist, draw Parish plans from LC1 plans. These plans are in turn sent to sub-counties where they are integrated in sub-county plans and subsequently budgets are made to ensure implementation. Unfortunately HBMF was not seen to feature in any of the sub-county or parish plans the team managed to see. The reasons found to explain this anomaly were:

a. There was very little if any, interaction between the Directorate of Community Services and the Directorate of Health Services at the district, sub-county and parish levels. The Community Development officers at the district and sub-county levels expressed ignorance of the HBMF program. The directorate of community services is responsible for coordination of all community based services as well as assisting parishes to develop parish development plans. The lack of interaction leads to isolation of HBMF activities from other community-based activities and denies inclusion of HBMF activities from Parish development plans and subsequent funding. There was confirmation from the Chief Administrative Officer (CAO) of Kanungu and all the chairpersons and sub-county chiefs interviewed in the districts visited, that it is feasible to include HBMF activities in the parish development plans, and thereafter in the sub-counties. This would ensure HBMF funding at parish and sub-county levels. This money could be utilized for HBMF supervision and probable motivation of DDs. There was however, fear that this could only be possible if the suggested abolition of graduated tax is not implemented. With graduated tax abolished, there is an urgent need to identify alternative funding streams controlled at the parish level.

b. The team established that health workers at the sub-county and HC2 were not conversant with the Local Government planning and budgeting procedures. It is expected that health assistants would be the link

between the health delivery system and the communities. The review team however, found concerning issues like water and sanitation, the health assistant and the community services personnel were coordinating and integrating their activities, this was not so for HBMF. Probing revealed that HBMF activities were seen as curative services and therefore outside the domain of the health assistants.

c. There is a general assumption that the health sector is well-funded and therefore does not require Local Government funding.

5.3.5 Reporting

In the districts visited, average reporting for DDs is less than 30%. Other reports indicate that a similar situation occurs in the majority of districts. Below is an illustration of reporting rates from 7 UPHOLD districts in 2004/2005.

Table 3: Reporting Rates from 7 UPHOLD Districts

	Districts	Proportion of DDs Reporting
1	Wakiso	<10%
2	Rakai	30 -40%
3	Kyenjojo	35-50%
4	Rukungiri	40%
5	Katakwi	50%
6	Gulu	50-60%
7	Kitgum	50-60%

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The dropout rates of the DDs are estimated to be between 10-20% in most districts, but the numbers could be more where supervision has not been conducted to a significant degree.

It was observed that most of the DDs were competent in filling the registers and this was ruled out as a cause of poor reporting rates. The following were some of the reasons identified as responsible for the low reporting :

1. Low DDs' motivation
2. Lack of effective supervision
3. Long distances to health units
4. Poor reception at health units ranging from:
   i. Failure to meet DD supervisors at the health units, It was noted that apart from one or two health unit staff who were oriented on HBMF, other health workers had no idea of what to do with the DDs or their reports
   ii. Supervisors too busy to have quality time with DDs
   iii. Homapak stock-outs in some health units

5. Drop out of DDs. Usually, when DDs drop out, no report is made. The reporting rate is recorded as having dropped, yet it is the denominator that has changed. If dropouts are not reported it becomes difficult to arrange fresh DD selections and retraining.

6. It was noted that when DD reports are received after the main HMIS reports have left the health unit, they are just shelved and this further affects reported reporting rates.

7. Compilation of HBMF reports at National level is very weak. This limits problem identification and resolution, particularly around Homapak stock outs and use of information to estimate the requirements. The MOH/NMCP & Resource Centre have already embarked on developing a database for HBMF.

5.3.6 Lessons from the Ochocerciasis Program in Kanungu District

The program had started as early as 1993/94 but was scaled up in 1997, when the African Program on Onchocerciasis Control (APOC) joined. APOC started by paying drug distributors five thousands shillings per day. Under this arrangement the Community Drug Distributors (CDDs) were expected to work for 8 days a month, and 3 months in a year. However, after only one month this policy changed and CDDs were expected to work on a voluntary basis. After the change in policy, there was a massive drop-out and new CDDs had to be recruited and trained.

The system uses parish supervisors who are responsible for supervision of the performance of CDDs, re-stocking the supplies of the CDDs and collecting data from the CDDs. The CDDs are supplied with bicycles. It was observed that while the dropout rate of the DDs was as high as 50-60%, the one for the supervisors was much lower. Reasons given were that in the selection of supervisors more care is taken in scrutinizing the candidates, those who have demonstrated interest in voluntary work before. Some of the supervisors and CDDs were found to have been on this program for more that ten years without big material incentives.

The following observations were made:
1. CDDs have the potential to volunteer for long periods of time
2. Unsustained payments to CDDs lead to massive drop-outs
3. Careful selection of CDDs yields increased sustainability of CDD activities

It should however, be noted that the onchocerciasis program operates only three moths in a year. This renders the program less taxing to the CDDs. Experiences and lessons from this program should be carefully examined before being related to continuous HBMF programs.

5.3.7 Factors Affecting HBMF Program Success at the Districts

The review team studied the performance of the HBMF program in the districts regarding drug supplies, supervision, reporting and drop-out rates. It compared these to the duration of the program, motivation of health workers, political/community support and organizational arrangement at the DDHS offices.

It was generally found that the longer the program implementation, the better the supervision and lower drop-out rates. Although the supervision and reporting of DDs remains below the required levels in all districts, with time there is an observed slight improvement as a result of health unit systems adjusting and

becoming more innovative to meet constraints (Rukungiri, Nakasongola). It was also found that with time all the DDs who had other expectations deserted. After observing the old DDs, new ones were recruited, and these were more aware of program expectations and as a result stayed longer. There was no observed relationship between length of program implementation and community support. (Lira and Rukungiri). The team found that sensitization given to community roles and responsibilities was not enough.

In districts where there was more commitment of the DDHS there was better drug distribution of Homapak (compared Lira with Kamuli). In Lira the district commitment to malaria activities is evident from the arrangement they have made – there is a malaria focal person, who is a medical doctor, and a specific person for HBMF, who is a public health physician. This commitment encourages innovative approaches to meet challenges like drug distribution, supervision and DDs' reporting.

In the Internally Displaced People's (IDP) camps HBMF programs performed better (see Gulu and Kitgum figures for drop-outs and reporting). This was due to the following reasons:

1. DDs in camps were not involved in other personal activities like trade and agriculture and had therefore more time for HBMF activities
2. The geographical area of coverage was small compared to outside the camps conditions
3. Communities were more responsive to the program because there were very few other alternatives (private health practitioners, drug shops and vendors)

5.3.8 UPHOLD Contribution to HBMF in Supported Districts.

The review team recorded the great contribution UPHOLD had made in the districts it is supporting. HBMF activities were running in all UPHOLD districts. The table below gives an overview of UPHOLD's HBMF drugs and systems support to the districts:

Table 4: UPHOLD Contribution to HBMF in Supported Districts

District	When HBMF started	UPHOLD contribution to DHT and community sensitization?	UPHOLD contribution on DDs' training	UPHOLD supply of Homapak	UPHOLD contribution to supervision	UPHOLD contribution to CORPS incentives	Type of incentives?	Other support UPHOLD regional team gave in regard to HBMF
Arua	Sept 04	No	Funds for training 482 DDs	Homapak was supplied by SHSSPP	Yes	No	N/A	Technical Support
Gulu	Jan 04	No	Funds for training 674 DDs	Yes(204,150 red &204,150 green)	Yes	Yes	(certificates, bags, badges & soap)	Technical support
Kitgum	Jan 04	No	Funds for training 410 DDs	Yes(97,825 red &97,825 green)	Yes	yes	(certificates, bags, badges & soap)	Technical support
Yumbe	Sep 04	No	No	No	No	No	N/A	Technical support
Kamuli	Sep 02	No	No	Yes	Kamuli	no	N/A	Technical support
Mayuge	July 04	Yes	Funds for training 780 DDs	Yes	Yes	No	N/A	Technical support
Bugiri	July 04	Yes	Funds for training DDs in 7SCs	Yes	No	No	N/A	Technical support
Pallisa	July 04	Yes	Funds for training 1400 DDs	Yes	No	No	N/A	Technical support
Lira	Sep 04	No	No	SHSSPP	No	No	N/A	Technical support
Katakwi	2002	No	No	MOH/WHO/SHSSPP	No	No	N/A	Technical support
Nakapiripirit	05	No	No	MOH/GFATM	No	No	N/A	Technical support
Mubende	2005,	No	No	No	No	No	N/A	-

Luwero	Sep 04	Yes	Yes	Yes	Yes	No	N/A	Technical support
Rakai	2002	No	No	Yes	Yes	No	N/A	Technical support
Wakiso	2004	No	For 300 DDs	Yes	Yes	No (but WHO provided)	bicycles	Technical support
Bushenyi	2005	No	No	Yes	Yes	No	N/A	Technical support
Mbarara	2005	No	No	No	No	No	N/A	Technical support
Rukungiri	2002	No	No	No	Yes	No	N/A	Technical support
Bundibugyo	Sep 04	No	914 DDs	Yes	Yes	No	N/A	Technical support
Kyenjojo	2002	No	No	Yes	Yes	No	N/A	Technical support

Summary of Major Findings

1. Supervision and reporting continue to be poorly managed in all districts visited. The reasons for this poor performance include:
   a. Lack of health centers in many parishes (Health Center II)
   b. Inadequate staffing in all health units
   c. Lack of clear guidelines on modes of supervision
   d. Inadequate sensitization of health workers on the HBMF concepts
   e. Inadequate funding for community-based health activities
   f. Inadequate training for supervisors
   g. Ambiguity on the role of MoH and Local Government in managing HC I
   h. Failure to recognize supervision of HBMF as a major component of integrated support supervision

2. Monthly supervision of DDs in their communities is not possible due to the following reasons:
   a. The number and geographical distribution of DDs is too big for a health centre to handle without disrupting routine work.
   b. The required logistical support is not available at the health units
   c. Not all health units have been prepared to handle HMBF supervision. Even where health units have been prepared, only a few of the staff members were trained to handle HBMF activities

3. Supervision of DDs at the Health Centers is poor or non existent because of:
   a. Limited numbers of HC II in many of the districts visited
   b. Inadequate staffing in the supervising health units
   c. Many of the health workers were not initiated in HBMF activities including HBMF reporting, and DDs' supervision
   d. Inability to fit supervision of HBMF as a major component of integrated support supervision

4. Quarterly review meetings are an appropriate DD support supervision strategy because:
   a. They will put less pressure on the limited time of health workers
   b. If well planned more DDs will receive regular support supervision
   c. Even with a transport refund for DDs, quarterly group meetings are cheaper
   d. The meetings can refresh and update all DDs on new issues
   e. They allow sharing of experiences and coping mechanisms among DDs
   f. If well organized, group supervision also enables individual supervision of DDs

5. DDs' reporting rate continues to be low because of:
   a. Lack of proper support supervision
   b. Poorly motivated DDs
   c. Long distances to reporting unit to deliver reports

6. Selection of Parish supervisors improves DDs' reporting because
   a. The HBMF focal person at the health unit can easily monitor one person per parish
   b. The travel allowance improves the supervisor's motivation and compliance
   c. DDs have easier access to help with registers and re-stocking

7. HBMF activities in general and supervision in particular is poorly funded for the following reasons:
    a. Little money is allocated to HBMF activities through the PHC funding system.
    b. HBMF activities have not been integrated into the local planning and budgeting systems

8. Lack of effective mechanisms to monitor DDs' dropouts

5.4 IEC Advocacy and BCC

5.4.1 Current IEC/BCC Strategy

Various approaches and media of communication have been used to raise awareness of technical and political leadership about key aspects of HBMF. Electronic and print media were initially dominant channels to inform the general public about the program. Later, focused approaches targeting special audiences such as community leaders were instituted countrywide. At each level of Local Government and health service delivery system, workshops and seminars were held to inform different audiences and build ownership of the program at all levels. Other media such as drama have been used in UPHOLD-supported districts in the north.

In districts such as Rukungiri, the general population and community leadership are sufficiently informed of DDs' role and about the HBMF program as a whole. The district used video shows at strategic centres such as Sub-county headquarters to highlight the dangers of malaria and need to manage fever within 24 hours. Leaders at all levels in the political structures joined the campaign that culminated in selection of DDs for each village, their training and onset of service delivery. Churches and other centres of worship have been used to capture particular population groups. All possible avenues have been used, including political gatherings. Some drama groups were facilitated to provide entertainment education to communities. The group depicted the dangers of malaria, and the need to respond quickly to avoid possible calamities. Community sensitization allowed each village council to carefully scrutinize potential DDs and select them based on informed choice.

A case of innovative information about existence of HBMF services in Kamuli involved the use of a sign post pointing to the home with a DD:

> *"In* (referring to a neighbouring village), *there is a lady who has put up a sign post of drug distributor….that is very important because anybody, even a stranger can know immediately the DD's home"* (FGD Balawoli Sub-County Local Council Leaders, Kamuli District)

It is a challenge for DDs to explain their role to the communities they will serve. It is very important to conduct sufficient advocacy for HBMF at all levels of the districts to get buy in of the different stakeholders. Attempts to create shortcuts in HBMF may have implications for acceptance and utilization of services of DDs in the district. There is need to organize IEC and advocacy sessions for revitalizing commitment of leaders and communities to the HBMF strategy . Such initiatives should be arranged at all levels.

There is evidence that massive community education and advocacy was conducted by leaders and health workers in the past:

> *"They always come and sensitize us. The (Health workers) from Balawoli Health Unit come...they walk from home to home throughout the parish to mobilize. They use the radio too"* (FGD Kawaga mothers of children under 5, Butalage LC 1, Balawuli Sub county, Kamuli District)

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> *"We have used funerals…. and at churches we tell people about the availability of services"* (FGD Balawoli Sub-County Local Council Leaders, Kamuli District)

Community leaders recall the challenges they faced at the inception of HBMF implementation due to some deep-seated misconceptions people held about the Homapak. One such misconception was that some people thought that there was a possibility of side effects of the drugs reducing maternal fertility or possibly causing death.

> *"We have told people that the drugs do not kill and also that Homapak does not reduce on the ability to produce children. The very first year (of HBMF implementation) actually was very hard. People had this misconception that the drugs reduce ability to produce"*. (FGD Balawoli Sub-County Local Council Leaders, Kamuli District)

As revealed in other studies (e.g Bolaji *et al.,* 2004) a multi media behaviour change communication campaign needs to be launched to inform and motivate communities to practise better treatment of malaria in children. As radio is a powerful and trusted source of information, it can be used as a lead channel of communication using radio programs and radio spots, with other channels supporting it, such as print, interpersonal, drama, song and dance (Ibid), community meetings as well as information dissemination by community leaders.

5.4.2 Quick Assessment of Community Response

Previous studies on malaria have shown positive response of communities to HBMF as well as positive impacts. One study (K2/DISH II 2002) shows that in four of the six districts surveyed, the proportion of mothers who sought care within 24 hours of fever onset increased significantly from the baseline to follow-up surveys. Another survey (referred to in Root *et al.,* 2003) later revealed that the most promising impact seen was the reduction in facility based malaria mortality rates for children under five years.

Findings of HBMF final evaluation (2003) shows that utilization of Homapak for management of fever is relatively significant in relation to other options that caretakers use. A table extracted from this study (showing percentage distribution of children that reported falling sick in the last two weeks prior to the survey by type of drugs they were given) put Homapak at 45.5% and 27.3% for same day and next day respectively. The promptness of treatment with Homapak did not appear to be much different from access to other drugs.

Table 5: Promptness of Treatment – with Homapak & other drugs

Drug	Same Day	Next Day	Two Days Later	Three or more Days Later	Don't Know	Not Reported	Total %
Chloroquine Tablets	55.5	19.7	6.1	17.7	0.3	0.6	100.0
Chloroquine Syrup	55.7	26.5	8.8	9.0	0.0	0.0	100.0
SP (Fansidar)	62.0	15.4	4.3	18.1	0.0	0.0	100.0
Homapak	45.5	27.3	12.1	15.2	0.0	0.0	100.0
Amodiaquine	51.7	18.7	10.4	19.0	0.0	0.0	100.0
Quinine	62.0	13.7	6.4	17.1	0.0	0.4	100.0
ASA (Aspirin)	60.0	14.7	8.6	16.4	0.0	0.0	100.0
Paracetamol	53.6	13.2	8.6	23.0	0.0	0.0	100.0

In this HBMF review, the only available data from Amach Health Centre 3 in Lira district showed decreasing cases of new attendances for children 0-4 years over time for the year 2002/2003 and 2003/2004 (see table below). These were attributed by staff to increased awareness of HBMF and therefore, higher numbers of children being treated for malaria by DDs and fewer going to the health facilities. There are, of course, many other factors which could have caused the difference (such as disease outbreaks, drug supplies, staff availability), and further investigation would be needed before drawing any conclusions from this finding.

Table 6: Curative and Preventive Health Centre Attendance Summary

Category	July to June 2002/2003		July to June 2003/2004	
	Number	Percent	Number	Percent
New attendances (cases 0-4 years)	**12,504**	**46.2**	**9,171**	**37.8**
New attendances (cases 5 and over)	**15,360**		**14,074**	
TOTAL NEW ATTENDANCES	**27,864**		**23,245**	
Re-attendances 0-4 years	**274**	**44.8**	**83**	**20.2**
Re-attendances 5 and over	**339**		**328**	
TOTAL RE-ATTENDED	**612**		**411**	

At the community level, the people (in the districts implementing the program for two years now) still have memories of the past and are quick to narrate the changes that have occurred from their own perspective:

> *"I will talk about the changes. The changes are visible. Two years ago, our children were dying from fever all the time….. just because of fever. The* (HBMF) *program has changed this. Fever has tremendously reduced. Children fall sick but they never die"* (FGD Balawoli Sub-County Local Council Leaders, Kamuli District)

> *"We have reduced the number of deaths caused by malaria …especially the number in children below 5 years have reduced"* (FGD VHT members, Amach Sub-county, Lira District)

> *"There is a big change because the drug distributors are near and can give help pretty fast"* (FGD Community Leaders Buhunga Sub County Rukungiri District)

An earlier socio-economic analysis study of HBMF in Uganda which was conducted in Kumi and Kiboga districts showed DDs were geographically accessible, generally available when needed including at night and the majority of the caretakers were seeking treatment from them. The study also revealed that spouses of DDs were helping with drug distribution though not formally trained to do so. The drop out rate of DDs was found to be relatively low; 10% for Kiboga and 15% for Kumi districts since program inception and districts had mechanisms of replacing lost DDs. On the other hand, the anticipated Local Government/community contribution towards facilitation of the DDs has not been forthcoming.

The overall performance of the HBMF can best be described as promising. This and previous studies show that DDs are largely competent to handle simple uncomplicated malaria. One study, the final evaluation of HBMF (2003) showed that in most of the cases, the sick children got the right type of Homapak. However, 27 percent of the children aged two to five years were given Homapak of red type (an under dose) and yet they should have got the green type. This further strengthens the need for more organized training and retraining of DDs

6 Recommendations

6.1 Strategy of Drug Distributors

1) It is crucial that the right persons volunteer and are selected as community drug distributors. Adequate community mobilization is crucial for this purpose to ensure that there is significant representation of the community during selection of DDs, so that the exercise is not just left to the LC1 Committee alone.

2) Training of DDs needs to be given due seriousness, including “responsible speed”, and adherence to the recommended guidelines; sufficient facilitator: participant ratio. Regular refresher training and quarterly supervision meetings with DDs will be mandatory to sharpen the DDs’ skills and fill training gaps where they exist.

3) Effort is required to work out a mechanism through which peripheral Local Governments such as sub-counties and village LC1s commit resources to meet the basic requirements to facilitate the work of DDs, as spelt out in the HBMF guidelines.

4) The types of incentive needed by DDs are more recognition and tools of their trade rather than a salary. These constitute a form of incentive to them. A systematic program is needed to remind all actors how they can demonstrate appreciation to DDs. (MOH should spearhead efforts for development of a systematic and coordinated approach for motivation of DDs with buy in from all stakeholders).

5) Districts should strengthen the supervision and monitoring systems to detect early those who drop out and put in place a mechanism of continuous training for replacement at health facility level. Districts may need support to build capacity at every health facility to carry out tailor-made training for new entrants.

6) The system of Village Health Teams (VHTs) is a more appropriate way than single function volunteers of providing services in communities with multiple health challenges that require the input of community volunteers. By reducing the geographical area covered by each volunteer, the workload should remain feasible.

7) Capacity for integration needs to be built at district and lower levels both in terms of training and in terms of resources. This can be supported by pooling funds from different sources at district level or allowing for flexibility in the use of funds districts receive from different programs and donors to foster integration.

8) The selection of Parish coordinators among groups of DDs is a practical innovation to improve reporting and drug collection and distribution,

9) The overall success of HBMF leads to a recommendation to maintain and expand the approach.

6.2 Drug Supply and Improving Delivery Mechanisms

a) The MoH through the NMCP, has the mandate of coordinating all malaria prevention and control activities in the country. Donors should therefore channel their Homapak supplies directly through MoH. The MoH should have the authority to distribute this Homapak to the beneficiary districts using the pull system. MoH should also have the authority to distribute any extra Homapak to other districts in need. This approach would help the NMS to process orders and organise distribution in a more effective and efficient manner. It would also reduce drug wastage due to oversupplies in donor funded districts and improve supply in non-donor supported districts. These activities should be priority concerns for the already established Homapak co-ordination team and the case management working group of the ICCM in Uganda at the MoH.

b) Homapak and any agreed successor should be included in the Essential Drugs List and the ordering list for essential drugs.

c) Homapak supplies should follow the normal drug supply/distribution protocol operating in districts

d) The Pull system should be used to order Homapak. It is however important to note that success of this system depends on the accuracy of DDs' reporting. Where reporting is very poor, urgent efforts should be made to improve it.

e) A system needs to be developed to monitor Homapak supply beyond the health unit. DADIs could include this in their routine drug inspection activities.

f) Whilst the strategy of ensuring more prompt treatment through Homapak containing chloroquine and SP combination has been shown to be better than having no HBMF, levels of resistance demand a change of drugs for HBMF as soon as possible. ART-LUM should be systematically introduced when issues of sustainability of supply have been resolved, provided it remains MOH's drug of choice. Supplies of ART-LUM for pilot studies

should be made available to allow operational research on acceptability and feasibility to commence as soon as possible to avoid delays in implementation when supplies become available (a case could be made to WHO for this).

g) Strong IEC and BCC activities should be instituted early enough to prepare health workers, DDs and communities for the change.

h) The review team recommends that efforts are made to ensure no gap in supplies of antimalarials for HBMF. This will require regular communication between UPHOLD and MOH in order to have sufficient supplies of Homapak containing CQ-SP, until the change is made.

i) The possibility of a change to amodiaquine-SP (AQ-SP) either on an interim basis or longterm has a number of attractions in relation to cost and efficacy, but recommendations on this option are beyond the scope of this review, except to suggest that operational research, particularly on the issue of acceptability, be undertaken without delay, so that as much evidence is available as possible to make rational decisions.

j) When a replacement for CQ-SP is selected, there is an argument for maintaining the term Homapak in the name of supplies for HBMF, in order to build on community understanding that it is a drug for children under five years old. It will be essential to avoid overuse of ART-LUM by adults, and this could contribute to achieving some control. A slightly modified name, such as Homapak Plus or Homapak 2 could be used to indicate that the contents have changed. It is unfortunate that the name Homapak has been used recently for adult packs of CQ-SP combination, and it is recommended that distinct names are used in future for under-five year home treatments and antimalarials for other uses.

6.3 Support Supervision and Monitoring and Evaluation

1. Quarterly review meetings held at supervising health units (HCs 2, 3 & 4) should be the preferred mode of DDs' supervision. It should be noted that a DD's reporting unit may be HC2, 3 or 4 depending on the catchment areas. So HC2s, 3s and 4s will all be expected to carry out DDs' quarterly meetings.

2. Quarterly supervision of each DD at his/her work place should also be done to understand better each DD's performance. All health personnel at the supervising unit should be trained and mandated to participate in DDs' supervision.

3. A standardized tool for DDs' supervision should be developed and widely used.

4. The supervising health unit should develop a duty roster for staff to collect DDs' data through DDs' meeting at parish level They should use this same opportunity replenish DDs' stocks of Homapak. The DDs can be given a transport allowance each time they come to these meetings. A health worker could extract the data from the DDs' records on to the HF summary sheet, while seeking clarification directly from the DDs on any gaps or omissions in the records.

5. Integrated quarterly meeting of supervisors should be held at districts and health sub-districts to improve supervisor's performance. HBMF should be an integral issue of these meetings.

6. All HC2s, including non-government facilities where they agree, should be involved in the HBMF program including DD supervision.

7. HBMF activities should be integrated into the parish development activities to ensure funding from Local Governments. Under this arrangement, the MOH and the Directorate of Community services should work together to conduct the technical support activities and the coordination and planning aspects respectively. This will be more applicable with the introduction of VHTs.

6.4 IEC, Advocacy and BCC

- There is enough evidence that behavioural change in treatment of malaria in children has occurred. There is need therefore to scale up and sustain IEC and BCC activities. There is also need to get strategic information from feedback and to use this information to modify or change IEC/BCC strategy as appropriate.
- DDs' training should be strengthened to improve their skills in IEC/BCC.
- Use of multiple approaches (community/leaders' meetings, radio programs, radio talk shows & other appropriate channels) is required to mobilize stakeholders (central government, local authorities, civil society and communities) on their expected contribution to motivation of DDs, as the review found poor understanding of this.
- IEC and BCC activities should be instituted early enough to prepare health workers, DDs and communities for the drug policy change.

6.5 Specific Recommendations for UPHOLD

At National Level

- Spearhead advocacy for a coordinated drug delivery system
- Support development of an IEC strategy for drug policy change

At District Level

- Facilitate an integrated support supervision process that covers HBMF
- Facilitate the coordination of HBMF drug supply system between neighboring districts i.e. excess drugs should be supplied to those districts that will be lacking the drugs
- Facilitate the delivery of drugs from the district stores to the health units
- Facilitate the establishment and implementation of an annual DDs' replacement plan at all district levels
- Support training of DDs in IEC/BCC

At Health Centers III & IV

- Facilitate the training of all health unit staff not yet oriented to supervising HBMF activities including DDs. Retraining should also be supported (annually or every two years)
- Facilitate the planning and holding of regular quarterly DDs' review meetings at supervising health units

At Community Level

- Facilitate the orientation of the Health Unit staff, health assistants, LC2s and LC3s, community development assistants in the role of HC1 (community) activities. This orientation will encourage the integration of HBMF and other community health activities into the parish development plans with subsequent funding from the sub-county
- Supply bicycles and monthly travel allowance to parish supervisors. This should be an interim activity with emphasis to parishes and sub-county, who are expected to take over the responsibility of transport allowance at a later date.
- Supply the DDs with the necessary materials and equipment to facilitate their work (making it clear which tools the community is expected to furnish).
- Support regular re-training (annually or every bi-annually) of DDs

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(Also see Annex 3)

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Annex 1. List of Persons Met

NAME	DEPARTMENT & DESIGNATION
	BUSHENYI DISTRICT LOCAL GOVERNMENT
Balemerwe Louis	Sub-County Chief Bihanga Sub-County
Byaruhanga Vitali	Chairperson Bihanga LC 3
Kabaraza Edrida	Nursing Officer i/c Bihanga HC 3
Katureebe Charles	DDHS
Mabuga William	Clinical Officer i/c Nsiika HC 4
Mukiza	DDI
Mutunzi Ephraim	Vector Control Officer
Naijuka Ephraim	District Storekeeper
Nsubuga Yosam (Dr.)	Medical Officer i/c Bunyaruguru (Lugazi) HSD
Turiyahikayo Nobert	Coordinator Gender and Community Services
	KAMULI DISTRICT LOCAL GOVERNMENT
Aoloi Raymond	DHE and district malaria focal person
Awula James	Chairperson LC2 Mugaya Parish
Kalende George	Clinical Officer i/c Balawoli HC 3
Mbadwe David	Health Inspector
Mbiira Moses	Store Keeper
Mugaya Stephen	Chairperson Balawoli LC 3
Osire Victor	District Nursing Officer
Tigawalana David (Dr.)	DDHS
	KANUNGU DISTRICT LOCAL GOVERNMENT
Hakiri Laurinho	District Vector control Officer
Kanyarutokye Moses	Deputy CAO
Mwijusya Simon	Laboratory Assistant
	LIRA DISTRICT LOCAL GOVERNMENT
Achar Serino (Dr.)	Medical Officer & district malaria focal person
Ayuho Agnes	HE and i/c malaria in Erute South HSD
Bua Tony	Store Keeper
Kusulo (Dr.)	DDHS
Okello Quinto	Medical Officer & i/c HBMF
Okori Richard Bongo	Records Assistant Amach HC 4
Okwel Charles	Chairperson Amach LC 3
Olong Patrict	Clinical Officer i/c Amach HC 4 & i/c Erute South HSD
	RUKUNGIRI DISTRICT LOCAL GOVERNMENT
Bagaba Gordon	Clinical Officer i/c Buhunga HC 3
Bamanyirahi Mathew	Chairperson LC 3 Buhunga Sub-County
Banga Julius	Vector Control Officer & Rujumbura HSD malaria focal person
Bijurenda Michael K.	District Malaria Focal Point (DMFP)
Bijurenda Michael	District Malaria Focal Person
Birungi Florence	Nursing Officer & Assistant to i/c Rujumbura HSD
Karabakabo Zephar	DDHS
Ndazaarwe Francis	District Health Educator (DHE)
Ndazarwa F	District H/E & UPHOLD focal person
Tiwaitu Cleophas	Community Services Coordinator
Tucungwirwe Reuben	Sub- County Chief Buhunga Sub-County
Turyagyenda John	Assistant Supplies Officer
Wilson	Deputy Chief Administrative Officer (CAO)
	MOH
Fred Kato	National Malaria Contol Program
Martin Oteba	MOH Pharmacy
	ADB
Edward Sekimpi	SHSSPP
	UNICEF
Acayi Jeffrey	Malaria
Kyobewra Eva	Child Health
	WHO
Ochwo Marcella	Community Health
	NMS
Luwande Jennifer	*"To be determined asp"*
	UPHOLD
Orabaton Nosa	Chief of Party
Mpeka Betty	Communicable Disease Specialist
Nsabagasani Xavier	Action Research Specialist
Kyenkya Margaret	Senior Health Advisor
Megere Humphrey	Child and Adolescent Specialist
Lulua Rita Laura	Community Involvement in Education Coordinator
Sherburne Lisa	Behaviour Change and Communications Specialist
Kateebire Lois	Community Participation Coordinator, Southwest Region
Okello James	Regional Manager North East
	MALARIA CONSORTIUM
Alison Bell	Public Health Specialist

Annex 3. Home-based Management of Fever Literature Review

Uganda Program for Human and Holistic Development (UPHOLD)

SCOPE OF WORK

For Documentation of the Lessons Learned And Recommendations To Increase Results In The Implementation Of The Home Based Management Of Fever Strategy

March - April 2005

I.0 Introduction

The Uganda Program for Human and Holistic Development (UPHOLD) is a 5-year bilateral program funded by the United States Agency for International Development (USAID) under Strategic Objective 8 (SO8: Increased Human Capacity). Communicable diseases control is one of UPHOLD's core areas for technical interventions. Malaria, TB and schistosomiasis form the main focus of communicable diseases control activities.

UPHOLD's holistic approach to development includes among others: strengthening effective partnerships and dialogue between the public sector, the private sector, communities and families; building on the existing strengths and opportunities of Uganda's wealth of socio-cultural resources and a behavior-centered orientation that focuses on understanding and strategically addressing human motivations and constraints in taking specific actions.

UPHOLD's main strategies include among others: working within district plans and priorities and increasing involvement of communities and families. This technical assistance is geared towards exploring the means for strengthening the HBMF delivery mechanism and looking at available options for sustaining the intervention.

The findings/lessons, documented from this scope of work will support and add value to the scaling up of HBMF implementation, as well as to address issues related to supervision and monitoring the progress of HBMF implementation, motivation of DDs and appropriate Homapak (drug) storage, stock taking and estimation (pull) system.

i. Purpose

To review the Home-Based Management of Fever Strategy and implementation in UPHOLD supported districts and make concrete, specific and practical recommendations on strengthening the implementation of HBMF at household, community and facility levels, current delivery mechanisms , and how to sustain the intervention in the context of declining volunteerism.

ii. Background and Rationale

Malaria transmission is endemic and perennial in approximately 90% of Uganda, with *Plasmodium falciparum*, the species responsible for severe malaria, being the dominant parasite. Malaria is the leading cause of morbidity and mortality accounting for 25-40% of outpatient visits at health facilities. 20% of all hospital admissions and 14% of all hospital deaths are due to malaria. The Ministry of Health in Uganda established its National Malaria Control Program (NMCP) in 1995, since that time there has been considerable progress putting in place interventions to reduce the burden of malaria.

In accordance with the Abuja target and the Health Sector Strategic Plan (HSSP) target of increasing to 60%, the proportion of children under-five years having access to appropriate treatment within 24 hours of onset of fever, Uganda launched the Home Based Management of Fever (HBMF) Strategy in June 2002. This entailed the training of community-based drug

distributors to distribute pre-packaged unit dose anti-malarial drugs marketed as “Homapak”. With the support of partners, the MoH is currently scaling up this strategy countrywide with over 30 districts having begun implementing the strategy. The availability of Global Fund monies (Round 4) means that it will be possible to implement the strategy in all districts.

To date, the 20 UPHOLD supported districts have varying levels of coverage with HBMF services, with support from different partners: MoH, UPHOLD, WHO, UNICEF, SHSSPP, WV and others. Nine (9) UPHOLD supported districts (Katakwi, Kamuli, Rukungiri, Bugiri, Rakai, Kyenjojo, Wakiso, Gulu, and Kitgum) have been implementing HBMF for over 2 years, Seven (7) (Arua, Bundibugyo, Mayuge, Lira, Yumbe, Pallisa, and Luwero) started implementation during FY 2003/2004 and 4 (Bushenyi, Mbarara, Mubende, Nakapiripirit) have come on board during FY 2004/2005.

However, with the experience of implementation, a number of issues and challenges that affect the strategy at the central, district, community and consumer levels are becoming apparent, and they focus on:

1. Sustaining the processes of selection, training and support of community drug distributors in the context of declining volunteerism and an impending drug policy change to an artemisinin-based combination.
2. Addressing perceptions of caretakers and family dynamics as they relate to HBMF;
3. Strengthening the current delivery mechanisms at decentralized levels for the intervention.

This SOW seeks to address the key issues and challenges at the district, health sub-district facility, community and household levels so that the HBMF strategy can achieve high coverage and be sustained as an effective intervention in the medium to long-term. This SOW also provides the opportunity to explore the potential in the innovative use of a child-to-child/child-to-parent approach by using primary school children to disseminate information to their parents and to assure appropriate treatment of fever in themselves and their younger siblings.

iii. Specific Tasks

The consultants work closely with UPHOLD technical staff (members of the core health team, core education team, Behaviour Change Specialist, Action Research Specialist, Monitoring and Evaluation team, DCOP-Technical and DCOP-Operations), UPHOLD regional staff (particularly the Community Participation Coordinators and, if available, the Communicable Disease Officers) district authorities (particularly the District Director of Health Services and his team), and UPHOLD-funded CSOs. Consultations also work with development partners, namely WHO, UNICEF, DFID, ADB, and others, to generate information on the following issues:

Annex 3. Home-based Management of Fever Literature Review

1.1 Strengthening and Sustaining HBMF

Assess the process of selecting, recruiting, training, supporting and retaining community-based drug distributors. Specifically:

a. Conduct a review of the literature on HBMF, related malaria control interventions, and best practices in the area of the use of Community Owned Resource Persons and/or community volunteerism in related malaria control or other health interventions (e.g. literature on the Community-Directed Treatment with Ivermectin (CDTI) program literature) and prepare a maximum of a 2-page summary of a) what is already known through the literature; b) what information gaps exist; and c) specific priority areas for research to be carried out in the present SOW based upon (a) and (b).

b. Compare the current recommended approach for the selection, recruitment, training and support of Community Drug Distributors for HBMF with that used for other CORPs (particularly Community Directed Distributors for Treatment with Ivermectin through the national onchocerciasis control program).

c. Review the selection process of DDs, with a particular focus on any gender-related issues in the selection process. Specifically, review who actually participates in selecting DDs, how much and in what ways are women involved in the selection process, and what is the current representation (percentage) of women among the selected DDs.

d. Review and, if possible, directly observe the training of DDs, with particular attention paid to the appropriateness of the facilitators, training methodologies, and training tools used (e.g. do they promote participatory and experiential adult learning?)

e. Assess the *monitoring, support and supervision* provided by different cadres at the different levels in the district (Health facility staff, HSD, the District Health Team, drug distributors, and households), and the processes for retrievals and compilation of data collected by the DDs and its eventual reflection in the HMIS. Make specific recommendations on how they can be strengthened.

   This should include recommendations on:
   - Integration of HBMF support / supervision into the district support supervision activities and supervision guidelines.
   - Frequency and mode of conduct of support supervision for DDs, borrowing on the models already tried out by different districts.
   - Perceived and assigned roles at different levels and among different programs for HBMF support / supervision.

f. Incorporate a gender-sensitive analysis to explore the experiences (including motivation and challenges) of community drug distributors (DDs) and health workers, good practices and ideas from communities and Local Governments on sustainable incentives for DDs, and based on these, make specific recommendations for ways to reduce drop-outs of DDs, and improve their performance. Recommendations should be gender-sensitive.

g. Review the various specific solutions that have been employed to retain drug distributors at the districts'

h. Identify how incentives packages can be standardized and financed, and delivered to the community-based drug distributors by communities, health facilities, and Local Governments.

i. Make recommendations on the suitability of different incentives that may be used to retain and motivate community-based drug distributors, based on interviews with DDs, mothers/caretakers and community leaders and Local Government technical officers (e.g. DDHS, Malaria Focal point person, Community Development Officer, HSD In-Charges).

j. Assess the knowledge and perceptions about HBMF/Homapak by health workers and the communities (mothers/caretakers, fathers and other decision makers for care seeking for fever) and develop recommendations regarding how UPHOLD, Local Governments, or CSOs should effectively address these to improve the implementation of HBMF at household, community and facility levels.

k. Review the political commitment at district level to the HBMF program (e.g. the role and participation of the Secretaries for Health and other district leaders at different levels (LC5 – LC 1) and the level of financial and material support given to HBMF services. Make recommendations on how this support can be strengthened.

l. Review the current IEC/BCC and advocacy interventions that go along with the HBMF strategy and make specific recommendations to improve strategic communication to promote prompt and effective treatment, appropriate use of Homapak, and assure quick referral of severely ill children.

m. (*Note: it was agreed in briefing meeting that this task was beyond the scope of the current review)* Through consultations with UPHOLD's Behaviour Change Specialist and core Education Team members and a review of literature on the child-to-child approach, explore the potential of working through the primary school system to implement a simple child-to-child or child-to-parent approach that actively engages primary school children in disseminating information to their parents and in promoting the effective treatment of fever in themselves and their younger children. Make recommendations as appropriate to involve primary school children and their teachers in an innovative strategy to support HBMF.

2.0 Improving Delivery Mechanisms

Assess and make recommendations on improving the drug (currently Homapak) supply pipeline (from District to DD to household level, appropriate storage of Homapak & correct maintenance of stock cards, estimation of Homapak requirements). This should include:

1. Consulting with the district health authorities, community leaders, and DDs on how to ensure adequate and reliable supplies and deliveries of Homapak to districts and health facilities including the estimation of the Homapak requirements and use of the pull system.

2. Specifically for drug supply at the district level and below, reviewing the flow of drugs and drug management at facilities, who is accountable for the drugs, and the use of records/stock cards to monitor Homapak stock levels, at the district stores, HSD, HFs and DDs level.

3. Improving drug supplies for difficult to reach areas.

3.0 Timing and Methodology

The work will be carried out over a period of 6 ½ weeks (a maximum of 40 working days, including Saturdays) by a team of consultants. National consultants will work for the full period (maximum of 40 working days including Saturday). An international consultant will join

the national consultants and work together with them for a maximum of 14 working days (including Saturdays).

Data collection methods will include: literature review, structured and semi-structured key informant interviews, focus group discussions, direct observation (e.g. direct observation of DD training, of DD selection, of drug distribution and treatment of children with fever, as possible), and case studies. The target respondents for generating this information will be community and district leaders (LCI –LC V levels), DDs, mothers/caretakers, health workers, primary school age children, primary school teachers or head teachers.

Throughout the work, extensive consultation with key partners and stakeholders will be maximized to assure ownership of the final products. In addition, at various stages of the work, report back and consensus meetings will be convened, with partners encouraged to attend and give input.

Table 7: Approximate Timing of the Work by Area and Main Activity

Activity	Week					
	1	2	3	4	5	6
Develop budget for field costs						
Literature review						
Instruments/protocol development						
Consultations with UPHOLD						
Data collection Documents/literature review						
Data analysis						
Report writing						
Debrief to UPHOLD						

4. 0 Deliverables (Outputs of the TA)

1. By COB Day 3: Revised Work Plan, with set dates for deliverables, for submission to the Senior Health Advisor - for review and approval.

2. By COB Day 7: 2 page summary of the literature review describing a) what is already done; b) what information gaps exist; and c) specific priority areas for research to be carried out in the present SOW based upon (a) and (b).

3. By COB Day 12: Draft budget, methodology and research tools for review and authorization by Senior Health Advisor and Action Research Specialist

4. 10 Days to the final day of the Consultancy: A consultant's draft report addressing the 14 points outlined in Section IV 1. above on sustaining HBMF and addressing the 3 points outlined in Section IV 2.0 above on Delivery Mechanisms.

5. 3 Days to the final day of the Consultancy:
   A presentation to UPHOLD staff and partners, describing the research methodology, key findings, and specific recommendations on the key activities and an overview of the findings of the review and proposed activities for strengthening and sustaining the HBMF strategy and improving the drug delivery mechanisms, with special emphasis to UPHOLD supported districts.

6. Final day of the Consultancy: A Final Report (in hard and soft copies) outlining:

   a) Description of Research Methodology and Timetable;
   b) Presentation of Data
   c) Discussion of Key Ffindings as per tasks and areas identified in section IV of the present SOW;
   d) ***Specific Recommendations*** that can be acted upon by UPHOLD, District Officials, CSOs, and other actors at decentralized levels as appropriate.
   e) Appendixes including list of documents reviewed, list of persons interviewed, research assistants, etc.
   f) All field notes and raw data (including tape recorded interviews or focus group discussions, transcripts, etc.) to be submitted to UPHOLD's Action Research Specialist at the end of the Consultancy.

5.0 HBMF to Promote Access to Prompt and Effective Treatment

A key component of the global Roll-Back Malaria strategy is to improve access to early and effective treatment. In the year 2000 African heads of state committed their governments to the Abuja targets, one of which is that 60% of malaria episodes will be appropriately treated within 24 hours of onset of symptoms (1). In much of Africa, however, access to health facilities with drugs and trained staff is limited, and malaria control programs have struggled to develop strategies to achieve prompt and effective treatment of malaria by all who need it. While many believe that malaria should be treated by medically qualified staff, if possible, with parasitological diagnosis, they recognize that at present this is not practocal for everyone. Caretakers find their own solutions by seeking treatment from drug sellers, and local healers, although the suitability and efficiency of such treatment is often inadequate. In a demographic surveillance site in rural Tanzania it was found that 90% of deaths in children under-5 years from acute febrile illness with seizures occurred at home; and 48% of these occurred without prior contact with a formal health facility. Of this 48%, some 85% saw some kind of traditional healer (2). This was an area with relatively good access to formal health services, where 85% of households were within 5 km of a health facility, and highlights the necessity of having prompt effective treatment as close to the home as possible.

5.1 Prompt Treatment

A study in Kenya found that mothers usually treated their children at home promptly (within 24 hours of onset of illness), but the time lag between onset of illness and being taken to a health facility was 3 days (3), a difference that could be critical for the children's survival. Another study in Kenya found 43% of children under five received care at a health facility, 47% received an anti-malarial drug at home, and 25% received neither. 91% of the treatments at home were started by the second day of fever and 92% were with the nationally recommended drug, showing that carers do provide prompt treatment (4).

5.2 Effective Treatment

Effectiveness of treatment depends on efficacy of the drug and its proper use (adherence to recommended dosage and timing of treatment).

Efficacy

A major shadow over the HBMF strategy in Uganda is the increasing evidence of resistance to the chloroquine plus sulfadoxine-pyrimenthamine (CQ-SP) combination. However, despite the declining efficacy of this combination, it was possible to measure a significant decrease in severe anaemia in children related to the introduction of Homapak through drug distributors in northern Uganda, indicating that improving delivery systems to ensure prompt treatment with correct dosing can have a substantial positive effect even with drugs which are not fully efficacious (5). This would suggest that assuring the same standards of delivery for a better drug would enhance still further the impact of the intervention. Uganda now faces urgent choices on the drug to use for HBMF. It had been planned to replace CQ-SP with artemether-lumefantrine (ART-LUM), phasing the latter in to HBMF after its introduction at health facility level. Unfortunately there is a crisis in global stocks of ART-LUM, so alternatives are being explored as follows: 1) continue CQ-SP until ART-LUM is available or change to amodiaquine-SP (AQ-SP). Amodiaquine-artesunate (AQ-AS) was considered, but is not a favoured option by MOH. Further discussion of drug choice can be found in section

One recent study reported that the efficacy of CQ-SP is similar to that of SP alone (6), while AQ-AS was associated with a lower risk of recrudescence but a similar risk of overall treatment failure when compared to AQ + SP in a site with relatively low transmission intensity in Uganda (7). A more recent study showed that the risk of recrudescence was high with CQ-SP (22-46%), and significantly lower with AQ-AS and AQ-SP. Although AQ-AS was the most efficacious regimen for preventing recrudescence, this benefit was outweighed by an increased risk of new infection, and the efficacy of AQ-SP was superior at the highest transmission sites. The high endemicity of malaria in Africa may have an effect on the efficacy of artemisinin-based combination therapy (8).

Adherence

Dosages in the Kenya study were often incorrect (4), and this is a widely reported problem of home treatment. Good results in improving compliance to home treatment have been achieved with pre-packed drugs for specific age groups (9, 10, 11), and the Uganda program has developed Homapak for this reason, A study in Uganda (12) found that caretakers would prefer the prepacked drugs to loose tablets.

5.3 Models of Home-based Management – Public or Private Sector

The concept of Home-based Management of Fever (HBMF) or home management of malaria (HMM) has gained wider acceptance in recent years, and is endorsed by WHO (13, 14, 15, 16). There are different strategies for delivery of home-based management of fever (17), and one of the major decisions to be made by Ministries of Health is whether to support and enable home-based management through community-based resource people, who link to the public sector or through improving the role of private providers, such as shopkeepers or a combination of both interventions. Uganda has selected the public sector approach in line with its policy of provision of free antimalarials, although it also has explored the role of medicine sellers, and has developed a policy for public private partnerships. The current Scope of Work does not give emphasis to exploring linkage between public sector supported drug distributors and private sector drug sellers, but given the wide use of drug shops the review will explore some of the issues and opportunities around this linkage.

The proportion of people seeking treatment first from medicine sellers in different African countries ranges for 15 to 82% (median 50%) (18), and they are used even

where village health workers exist (19, 20, 21). A project to improve the practices of medicine sellers through education, negotiation and persuasion in Uganda (22) found very substantial improvements in recommending the correct medicine (2 to 73% for simple malaria and 2 to 90% for complicated malaria) and the correct dose (0 to 68% and 2 to 47% respectively) immediately after the intervention. It noted the importance of full engagement of the MOH in developing a national strategy. Other interventions to improve the role of the private sector in home management have been described (18, 23-28).

A number of important issues are now arising in relation to use of ACTs for HBMF and in the private sector (23). Poor regulation of medicines in Africa and the higher profit margin with ACT, make it likely that fakes will be common in private sector, as has happened for artemisinin-derivative monotherapy in southeast Asia. It will be important to strengthen systems of regulation including monitoring.

5.4 Improving recognition of Malaria at Home

One of the reservations about allowing people with limited training to treat simple malaria is the issue of overuse of drugs on patients without malaria due to lack of diagnostic capacity. Interestingly, one study (29) showed that the diagnosis of malaria in children performed at home by their caretakers is comparable to that made at the health centre.

Recognition by caretakers has been studied in several countries and in several studies in Uganda, and collection of further data was not considered a priority for this review. One important observation in Uganda is that the HBMF strategy does not address local community understanding of “fever” and its influence on treatment, so Homapak is likely only to be used for those types of fever where western treatment is perceived appropriate, thus continuing to delay treatment of some malaria (30).

5.4 Improving compliance

An intervention to improve compliance was evaluated in Ghana, including training of providers, health education for patients and care-takers, and the pre-packaging of chloroquine in plastic bags. This was highly cost-effective: for a very low income country with high transmission the cost effectiveness ration (CER) was under $25 at any level of drug resistance below 77%. In low transmission areas the CER range fell under $25 up to 24% resistance, and under $150 up to 87% resistance. Results were very similar for middle and high income countries (31).

5.5 Impact of HBMF and monitoring and evaluation

McCombie (32) provides an extensive review on self-treatment of malaria, and notes that its role in reducing mortality is currently unknown. She also notes that, although there are some common patterns, there is considerable diversity of treatment practices even in a single country. She also calls for more rigour in studying treatment practices, as studies move from descriptive to evaluation. Studies in Burkina Faso (33) and Tigray, Ethiopia (34) suggest that training of mothers can lead to reduction in severe disease and death respectively. A recent study in northern Uganda demonstrated a reduction in severe anaemia in children under five years old following introduction of Homapak (5).

5.6 Choice of drug

In response to a paper questioning the wisdom of introducing ACTs into home-based management WHO (16) argues that the use of different drugs at different levels of the health care system (which includes the community level) raises an important ethical issue of less effective medicines being used where the population is often poorer ("poor medicines for the poor"). It also notes that a two-tiered drug policy

would pose a tremendous burden on the health system of resource poor countries. The added complexity of maintaining dual health education messages drug distribution, delivery, training and supervision, could prove operationally difficult.

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Annex 4. List of Focus Group Discussions conducted

1. Local Council Leaders (LC1 Chairpersons), Balawoli Sub-County, Kamuli District
2. Mothers of children under 5 years, Barokwok Village, Amach Sub-county Lira District
3. Mothers of children under 5, Butalage LC 1, Balawuli Sub-county, Kamuli District
4. Mothers of children under 5, Buhunga, Sub-county, Rukungiri District
5. Mothers of children Under 5, Bihanga Sub-County, Mburamizi Village, Bushenyi District
6. Drug Distributors, Bihanga Sub-County, Mburamizi Village, Bushenyi District
7. Drug Distributors, Kawaga Butalaga LC1, Balawoli Sub-county, Kamuli District
8. Drug Distributors, Buhunga Sub-county, Rukungiri District
9. Village Health Team Members, Amach Sub-county, Lira District
10. Adult Male Household Members, Amach Sub-county, Lira District
11. Adult Male Household Members, Kagarama Village, Buhunga Sub-County Rukungiri District
12. Adult Male Household Members, Bihanga Sub-County, Mburamizi Village, Bushenyi District
13. Adult Male Household Members, Balawoli Kawaga LC1, Butalege Balawoli Sub-county, Kamuli District