



## MALARIA COMMUNITIES PROGRAM

# Strengthening Platforms for Case Management in Communities

## INTRODUCTION

About 3.3 billion people—half of the world’s population—are at risk of malaria. In 2010, there were about 216 million malaria cases and an estimated 655,000 malaria deaths. Ten years ago, malaria caused at least one million deaths among children under five alone. Increased prevention and control measures, in part led by the President’s Malaria Initiative (PMI) in sub-Saharan Africa, have led to a reduction in malaria mortality by more than 25% globally since 2000 and by 33% in Africa, according to the World Health Organization. While increasing use of insecticide-treated nets and indoor residual spraying has been making a noticeable impact, expanding case management for malaria is just as critical to reducing malaria deaths over the long term. Evidence now supports the incorporation of integrated Community Case Management (iCCM) into national malaria strategies as a key approach to continue reducing the world’s malaria mortality burden.

### The Malaria Communities Program

The Malaria Communities Program (MCP) was launched on December 14, 2006. Through 20 awards to 18 partners in 12 countries, the President’s Malaria Initiative (PMI) has supported efforts of communities and nongovernmental organizations to combat malaria at the local level.

The MCP increased local and indigenous capacity to undertake community-based malaria prevention and treatment activities; built local ownership of malaria control for the long term in partnership with communities and National Malaria Control Programs (NMCPs); and extended coverage of PMI and NMCP interventions to reach a larger beneficiary population.

Case management of malaria means early, accurate diagnosis, and prompt, effective treatment. PMI’s strategy for malaria case management focuses on: 1) universal diagnostic testing and appropriate treatment with artemisinin combination therapy (ACT) drugs; 2) routine monitoring of the efficacy of antimalarial drugs through health facilities; and 3) introduction and scale-up of iCCM of malaria. MCP partners operated amidst changing global and national policies for malaria case management, strengthening community-level systems and strategies in a variety of policy contexts. MCP partners played a key role in creating demand for high-quality treatment in communities, and contributed to building platforms for, and in some cases introducing, iCCM.

## METHODS AND DATA

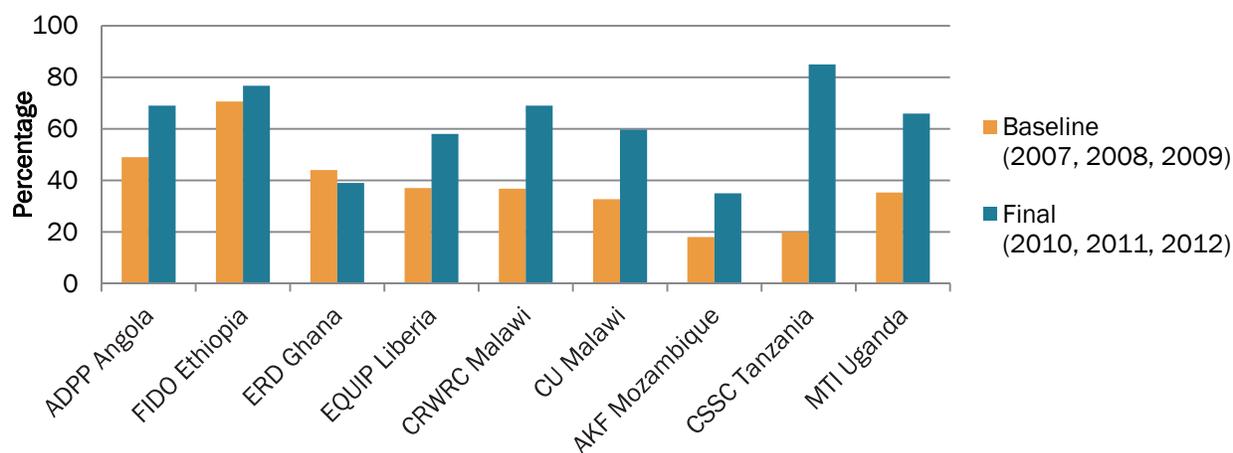
This paper presents results from MCP projects working to strengthen community-level systems for malaria case management and examines in detail the work of five MCP partners in this regard: EQUIP Liberia, HealthRight Kenya, Aga Khan Foundation (AKF) Mozambique, HealthPartners Uganda, and Medical Teams International (MTI) Uganda. MCHIP collected multiple forms of data from these five grantees using qualitative methods, including individual interviews with key project personnel and review of key documents. MCHIP then compared data across projects to better understand the overall contributions made by MCP. Some partners conducted surveys and this report includes relevant quantitative data although data are limited by a lack of standardized reporting. As iCCM continues to rapidly expand, related monitoring and evaluation tools including standardized indicators and reporting guidance are

following closely behind so that future efforts to strengthen community platforms for case management will be better documented.

## KEY FINDINGS

The following sections describe MCP partners’ efforts to address the following components of case management: 1) training community health workers (CHWs)/volunteers and health facility staff in malaria case management; 2) improving inventory management of the critical diagnostic tests and appropriate drugs for treatment; 3) introducing referral systems to ensure a continuum of care from community to facility; and 4) establishing supervision systems for case management. Behavior change communication (BCC) was a significant part of MCP partners’ programming, complementing efforts to strengthen referral systems and training components, and encouraging prompt care-seeking, which increased in almost all MCP project areas where it was measured (see Chart 1). Partnerships between community stakeholders and Ministries of Health (MOHs) supported these efforts.

**Chart 1. Prompt care-seeking: Increased demand for prompt malaria treatment (general indicator: percentage of children under five treated promptly with an appropriate antimalarial\*) in three-, four-, and five-year projects**



\*Indicator definitions vary.

## Training

MCP partners strengthened malaria case management including extensive training at all levels of the health system. For example, EQUIP Liberia trained a new national cadre of health volunteers, known as “general community health volunteers” or gCHVs, on causes, symptoms, diagnosis, and treatment of malaria. The project also developed a new guide, or illness classification card, to assist gCHVs in following algorithms during the assessment of sick children, and an oral exam to assess gCHV competency. These contributions have led to the systematic scale-up of the community volunteer program in Liberia and harmonized implementation of this cadre by the MOH and partners.

HealthRight Kenya developed a comprehensive health systems training strategy that included training of: local health facility staff on microscopy and use of Rapid Diagnostic Tests (RDTs); community-based organizations (CBOs) on behavior change communication for malaria control; CHWs on malaria causes, symptoms, diagnosis, and treatment; and District Health Management Teams (DHMTs) on managing the different aspects of disease control. HealthRight’s final evaluation included a capacity assessment of trained CBOs and a functionality assessment of CHWs, which showed that nine of the 10 CBOs had increased their perceived overall capacity, including capacity categories like human resources, project design

and management, and community ownership and accountability. All CHW units scored themselves as partially or fully functional in nine of 13 categories.

MTI Uganda trained trainers among district health facility staff in social and behavior change and supported facility staff to train and mentor village health teams (VHTs). Trained VHTs then mobilized the community by conducting home visits to ensure proper hanging and use of long-lasting insecticide-treated nets (LLINs) and providing education on and encouragement for timely treatment of suspected malaria, which strengthened linkages to the health system. HealthPartners Uganda also trained VHTs using materials provided by the MOH, and those VHTs then sensitized communities on malaria prevention and care-seeking.

AKF Mozambique supported MOH training of community health activists, or Agentes Polivalentes Elementares (APEs), by refreshing their knowledge of first-line malaria drug guidelines, managing RDTs, and making referrals.

MCP partners assisted the MOH in filling critical implementation and training gaps, particularly at the district level. The projects supported refresher trainings for health care providers and community health volunteers following revisions or updates to national malaria treatment policies. Most community health workers do not receive salaries or monetary incentives from the government. In Liberia, the Ministry of Health and Social Welfare’s community health strategy states that motivation is left to the communities to show appreciation through in-kind contributions such as farm work. MCP partners supported small incentives to motivate health volunteers and keep them engaged in health promotion efforts, thereby ensuring their retention. Incentives usually consisted of relevant equipment and supplies that would allow health volunteers to more effectively and efficiently carry out their responsibilities. No MCP partners supported salaries for community health workers. Table 1 shows the number of CHWs and CHVs trained by MCP partners and the incentives used to motivate and retain them.

**Table 1. CHWs and CHVs trained by MCP partners**

MCP Partner	Country	Project Period	No. of Districts or Population Covered	No. of CHWs/ CHVs	Incentives for CHWs Provided by MCP Projects
EQUIP	Liberia	2008–2011	2 counties (Nimba and Sinoe)	1,392 gCHVs trained 225 gCHVs trained in malaria CCM	Bicycles, rain gear, water containers. EQUIP is also developing a national, performance-based incentives strategy for the gCHVs.
HealthRight	Kenya	2009–2012	5 districts (West Pokot, North Pokot, Central Pokot, Trans Nzoia East, and Marakwet)	1,050 CHWs	Job aids and non-financial incentives such as a T-shirt, training certificates, a bag, and safe motherhood flash cards.
Aga Khan Foundation	Mozambique	2009–2012	9 districts (Quissanga, Meluco, Ibo, Pemba Metuge, Macomia, Mueda, Nangade, Muidumbe, and Ancuabe)	132 APEs	Bicycles, quarterly “follow-up” meetings.
HealthPartners	Uganda	2008–2012	5 districts (Bushenyi, Rubirizi, Buhweju, Sheema, and Mitooma)	1,745 VHTs	T-shirts.
Medical Teams International	Uganda	2009–2012	4 districts (Alebtong, Lira, Dokolo, and Otuke)	2,182 VHTs	Rain boots, soap, T-shirts, and financial stipends to cover transport and lunch allowance during quarterly review meetings.

Table 2 shows treatment statistics from iCCM pilot studies that were incorporated into these projects.

**Table 2. Treatment statistics from two pilot studies**

MCP Partner	Country	Timeframe	No. of RDTs Performed	No. of RDTs Positive	No. of Clients Treated with ACT	Comments
HealthRight	Kenya	2 weeks	1,491	619	612	252 of 870 who had negative results were also treated.
Equip	Liberia	6 months	3,096	2,175	1,256	There was some confusion about whether gCHVs should report and treat two conditions at one time. Therefore, some gCHVs reported only the dominant complaint rather than both complaints. Of all the malaria-positive cases, 9% were identified and either treated or referred for both malaria and pneumonia, while 2% of malaria cases also presented with diarrhea.

## Strengthening Inventory Management of Essential Malaria Commodities



*Photo by Debra Prosnitz*

MCP partners assisted with improvements in inventory management of essential malaria commodities through various approaches designed to strengthen assessment and forecasting of upcoming needs. Both RDTs and ACTs are essential commodities for the implementation of iCCM, which supports diagnosis and treatment of malaria cases at the community level by trained CHVs/CHWs. Both commodities present particular logistics and management challenges. For example, ACTs have complicated dosing recommendations, an 18-month shelf life, and an immediate street value that can be converted to cash. RDTs require gloves and proper waste disposal for infection prevention. Therefore, MCP partners helped with safeguards to protect these commodities and ensure their correct use in the management of malaria. Specific examples of MCP contributions include:

In Kenya, HealthRight coordinated with the MOH to map consumption rates so that project districts could more accurately forecast commodities. EQUIP Liberia helped the MOH develop systems to prevent stock-outs of malaria or iCCM products (e.g., ACTs, RDTs, etc.). A key aspect of this stock management system was regular reporting by gCHVs on use and availability of drugs, including identification of shortages in gCHV kits, which aided EQUIP in conducting accurate forecasting for gCHVs and facilities jointly with the MOH. EQUIP Liberia staff noted, “We were constant in giving feedback [to MOH] and reporting to them, so they knew that the drugs were going to the community and the community was using them.” The project enhanced the flow of information about iCCM commodities between the MOH and gCHVs.

MTI advocated for improvements to the supply chain and increases in needed ACT commodity stocks in post-conflict Northern Uganda. MTI’s MCP Project Director believes that their advocacy contributed to the MOH’s change from a “pull” system to a “push” system of supplying drugs directly to health facilities in Northern Uganda, thereby more effectively meeting needs on the ground. In another area of Uganda, HealthPartners worked closely with the Strengthening Pharmaceutical Services Project (a former centrally managed USAID

implementing partner) to train health workers in supply chain and commodity logistics management.

## Strengthening Referral Systems

A key objective of all MCP projects was to link suspected malaria cases with health facilities to increase timely access to diagnosis and treatment. MCP partners introduced strategies to strengthen referrals of malaria cases from communities to facilities and from facilities back to the community health worker for patient follow-up. MCP partners in Kenya and Uganda engaged community groups to strengthen referral systems, including working with community health committees that oversee CHW activities. A District Medical Officer of Health in Kenya noted that the linkages formed by HealthRight between community groups and health care providers ensured that identical health messages passed between the groups and providers. Health providers gave referral notes on patients who were seen and treated at a facility back to the volunteer for further follow-up. HealthPartners Uganda Health Cooperative Project Director emphasized that community leaders now attend the quarterly meetings with VHTs and health facility staff so they can learn firsthand of any malaria cases treated and requiring further follow-up.

MCP partners developed materials, provided equipment and supplies to improve the referral system, and facilitated linkages with health facilities. Examples included: production of referral forms (EQUIP Liberia, HealthRight Kenya, MTI Uganda, HealthPartners Uganda) and referral guides (AKF Mozambique); establishment of mobile clinics (HealthRight Kenya) for early detection and referral of malaria cases; and provision of cell phones for CHWs to alert facilities of incoming referrals or seek assistance from supervisors (EQUIP Liberia). In Uganda, the MOH lacked referral forms when MTI's project started. MTI developed referral forms, trained VHTs, and linked VHT activities to health facilities (e.g., health education sessions explaining when a child with fever should go to a health facility). VHTs also made home visits and gave referral cards to the mothers/caretakers for their sick children in order to expedite their consultations at the health facility. MTI trained both VHTs and facility staff on the use of the new referral forms. One of MTI's district mobilizers reported that "people with referral notes receive attention first. In one way or another, this has bridged the gap between community and the health facility."

EQUIP Liberia also provided gCHVs with referral forms and trained them on their use. The evaluation of EQUIP's iCCM pilot found that approximately 17% of gCHVs' consultations resulted in referrals, which is the protocol for complicated cases or when the necessary commodities to diagnose and treat are unavailable. The project encouraged clinicians with gCHV referrals to report back to the gCHVs after treatment on the status of the patient. EQUIP's Project Director reported that receiving feedback from clinicians motivated gCHVs to follow up with patients regarding drug compliance or any further problems, and "even the communities are very happy with the system because the clinicians pay attention to them when they come with referral." However, the evaluation of the iCCM pilot found that while referral follow-up cards were seen in the community, gCHVs reported that the clinician or screener often did not return the referral forms to them directly, either because the clinician or screener forgot to fill out the form or the caretaker did not ask for it to be returned to the gCHV.

MCP partners' efforts to strengthen referral systems have not been without challenges. New referral forms necessitate additional training and supervision of community volunteers and facility health workers. Recruitment of qualified and literate CHWs/volunteers who are capable of completing the forms can be difficult. EQUIP Liberia had difficulties recruiting women for gCHV positions due to the high illiteracy rates. HealthPartners Uganda reported that VHTs complained that there was no reporting system in place at the facility level to record referrals

from VHTs. Maintaining an adequate supply of forms in both communities and facilities also poses a challenge in resource-poor settings.

## Strengthening Supervision Systems



Photo by Debra Prosnitz

MCP partners strengthened supervision systems to improve health worker performance and ensure that the workers follow standard practices and national policies for malaria case management. In Liberia, EQUIP piloted iCCM in 15 target communities, which included monthly supervision visits to each gCHV. During these visits, supervisors reviewed gCHV ledgers and rational use of drugs, observed patient consultation, confirmed effective follow-up and health education, and provided on-site training. EQUIP was a leading partner in developing the draft National Strategy and Policy on Community Health Services in 2011, a policy that incorporated components of good

practices, including monthly supervision visits, based on their successful experiences from their iCCM pilot.

EQUIP also conducted monthly supervision of health facility staff and encouraged them to work closely with gCHVs. EQUIP piloted a strategy in which a MOH Community Health Service Provider supervised each gCHV to ensure a strong linkage between community and government health facilities. This work informed the draft National Strategy and Policy on Community Health Services and draft National Malaria Control Strategy 2011–2015, which places County Health & Social Welfare Teams under supervision of Community Health Directors, as the primary liaisons and supervisors of gCHVs, CHWs, and Trained Traditional Midwives.

In Mozambique, AKF collaborated with Provincial Health Department staff in Cabo Delgado Province to coordinate supervision of 132 APEs as they carried out iCCM activities, as well as supervision visits to clinical health facilities to observe use of RDTs and stock management. AKF and their local partner Progresso conducted joint supervision visits of health facility staff with Provincial MOH staff every three months. Community health committees coordinated community-level supervision of the APEs conducted by the District Health Facilitator, AKF, Progresso, and health facility staff, and also provided health messages to communities and promoted care-seeking via APEs. Progresso’s Program Director noted that community members valued and respected APEs once MOH staff had formally reinstated APEs as frontline health workers and demonstrated their support through supervision visits.

The Kenya PMI Malaria Advisor discussed supervision efforts led by HealthRight International, in collaboration with the DHMTs: “They have a system that shows what is happening in regard to malaria treatment.” A representative from Kenya’s National Malaria Control Program (NMCP) further noted that supervision improved the quality of malaria diagnosis and treatment by helping “to ensure health workers are following government guidelines,” and that additional intensive mentoring to health workers reinforced quality. Table 3 summarizes MCP partner supervision activities.

**Table 3. Summary of MCP partner supervision activities**

Partner	Supervision Activities	Results
EQUIP Liberia	<ul style="list-style-type: none"> <li>▪ Supervision of community health volunteers providing iCCM</li> <li>▪ Development of tool for supervising volunteers</li> <li>▪ Supervision of health facility staff in their role of supporting volunteers</li> </ul>	<ul style="list-style-type: none"> <li>▪ 21 gCHVs received bi-monthly supervision visits.</li> <li>▪ One monthly supervision visit to each gCHV was conducted jointly with MOH team, including and NMCP Central delegate.</li> </ul>

Partner	Supervision Activities	Results
HealthRight Kenya	<ul style="list-style-type: none"> <li>Joint supervision with district health teams</li> </ul>	<ul style="list-style-type: none"> <li>All 21 project facilities received a quarterly supervision visit from the DHMT to monitor supplies of drugs and LLINs and to observe service delivery.</li> </ul>
AKF Mozambique	<ul style="list-style-type: none"> <li>Supervision of volunteers providing iCCM</li> </ul>	<ul style="list-style-type: none"> <li>Project facilitators conducted supervision visits and collected data from activists and health committees on a monthly basis.</li> <li>Facilitated logistics for joint supervision with MOH to APES.</li> </ul>
MTI Uganda	<ul style="list-style-type: none"> <li>Development of quality improvement tool for supervision of VHTs</li> <li>Link VHTs to health facilities for supervision</li> </ul>	<ul style="list-style-type: none"> <li>Health facility staff shared results of supervision visits with stakeholders at quarterly district Malaria Steering Group meetings.</li> </ul>
HealthPartners Uganda	<ul style="list-style-type: none"> <li>Supervision of VHTs</li> <li>Facilitation of quarterly meetings between VHTs and health facility staff for supervision</li> </ul>	<ul style="list-style-type: none"> <li>Held “quarterly meetings at which health workers provide VHTs with updates and encouragement, and review monthly data collection.” – <i>Rubirizi District Health Officer</i></li> <li>“Worked with the MOH to develop a supervision checklist that is clear and straightforward.” – <i>PMI Advisor, Uganda</i></li> </ul>

MCP partners faced some challenges implementing supervision systems. Health facility staff often did not prioritize providing feedback to health volunteers on their performance as part of their supervisory observations; this was often due to time constraints (e.g., facilities were short-staffed) or perceptions that community volunteers lack applicable skills to diagnose, treat, and properly refer sick children. However, collaboration improved and supervisory visits became more relevant as confidence and trust in the performance of CHWs/volunteers increased, and facility staff recognized the expanded reach of CHW services into communities. For example, a District Health Officer (DHO) from Northern Uganda commented: “... health workers are accepting of VHTs and referrals, as part of facilitation of clients being well received.” Table 4 further describes the supervision contexts in the selected MCP project areas.

**Table 4. Supervision contexts in MCP projects**

MCP Partner	Country	Supervisor Cadre	Areas Targeted for Supervision	Frequency of Supervision	Location
EQUIP	Liberia	MOH frontline worker	Log books, patient consultation, follow-up, BCC	Monthly	Community
HealthRight	Kenya	DHMT, MCP technical staff	Stock, case management quality	Quarterly	Health facility
Aga Khan Foundation	Mozambique	Provincial MOH workers, Community Health Committees, MCP technical staff	Stock on hand, community activity assessment for content and quality	Quarterly	Health facility and community
HealthPartners	Uganda	Health center health workers, local leaders	Improving supportive supervision; Piloted MOH supervision tool in one district in 2012	Quarterly	Health facility and community
Medical Teams International	Uganda	DHO, Assistant DHO, malaria focal person and MTI staff	Malaria service provision in the facilities and general health services including staffing, medical supplies, and accommodation, among others	Quarterly	Health facility

## KEY MESSAGES

MCP partners made important contributions to malaria case management in their project areas and in partnership with the MOH. MCP projects have helped advance the rollout and implementation of iCCM, and improved access to early diagnosis and effective treatment of malaria cases at the facility level. The projects' successes and lessons learned contributed to improved service delivery and can be replicated in other settings or scaled up for greater impact. Three key contributions are noted regarding the role that MCP projects played in malaria control:

- **MCP partners played a key role in informing policy.** EQUIP implemented iCCM in its project area in Liberia, increasing community access of the most effective malaria drugs, ACTs, to 25,000 people. The project's experiences in supervision and establishment of a referral system informed the MOH strategy for nationwide rollout of iCCM benefiting nearly 3.5 million people. HealthRight Kenya piloted the use of RDTs in health facilities to inform nationwide rollout of RDTs planned for 2015. The project identified incorrect case management practices (e.g., health care providers routinely treated patients with an ACT despite a negative RDT result) and trained health care workers in correct RDT use prior to country scale-up of RDT use.
- **MCP partners built community capacity to facilitate iCCM implementation.** Although iCCM is not yet official policy in Uganda, MTI and HealthPartners have built a solid foundation for the introduction of iCCM by linking communities to health facilities through VHTs who are supervised by health center staff and refer patients to facilities for treatment. Although Kenya has not yet adopted iCCM, HealthRight conducted extensive training of CHWs in diagnosing and treating malaria, developed referral and supervision systems, and produced training materials to prepare for a rapid implementation of iCCM once the policy is in place.
- **MCP partners were essential partners in iCCM rollout.** Mozambique's MOH supported community volunteers to diagnosis and treat malaria but only on a limited scale by a cadre of volunteers who needed re-training and supervision. AKF Mozambique, in partnership with a local nongovernmental organization (NGO), Progresso, collaborated with the MOH to scale up training of volunteers and developed a coordinated, joint supervision strategy. The MOH/NGO joint approach to supervision built MOH capacity to supervise iCCM volunteers that has continued beyond the life of the project.

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