Beyond prevention: home management of malaria in Kenya

Advocacy report

Kenya Red Cross

Canadian International Development Agency

Agence canadienne de développement international

World Health Organization

Canadian Red Cross
Croix-Rouge canadienne

International Federation of Red Cross and Red Crescent Societies

In Memoriam

This report is dedicated to **Benson Fahamu Fujo**, a Kenya Red Cross Society volunteer working for Home Management of Malaria (HMM) in Kadzisitseni village who was killed by a hippopotamus as he conducted HMM work in his village on 10 August 2010. He exemplified the enthusiasm and commitment to humanitarian action shown by Kenya Red Cross volunteers throughout the HMM project.

BEYOND PREVENTION:
HOME MANAGEMENT OF MALARIA

HOME MANAGEMENT OF MALARIA (HMM) is a strategy to improve access to appropriate and effective malaria treatment in the community or home through early recognition of malaria symptoms, together with prompt treatment. To do this, volunteer members of the communities are trained to recognize fever, to administer treatment to children under five years of age when they find it, and to advise on follow-up treatment and prevention. They are monitored by a trained member of staff, such as a public health officer. They carry out a vital role in educating the community on prevention methods and on what options there are for treatment when malaria does strike. They may also be empowered to offer other medications and first aid.

In Kenya, the Ministry of Public Health and Sanitation (MoPHS) partnered with a number of organizations, particularly Kenya Red Cross Society (KRCS), to set up an HMM project in 113 villages in two districts, both of which are remote and with difficult terrain, and both of which have a high malaria burden, high poverty rates and little access to public health facilities. The partnership worked well, with KRCS providing the volunteers, and the MoPHS providing supervision using mostly public health officers from local health facilities. The project was carefully monitored in order to measure results, and volunteers were trained in rigourous record-keeping to inform the research.

International Red Cross Red Crescent believes programmes that empower communities to respond comprehensively to malaria are part of the winning formula to beat the disease. When community-based volunteers are equipped and empowered to provide knowledge, prevention and treatment options, local people become first responders to combat this ancient scourge. With ownership and empowerment they are able to sustain the HMM programme, provided they continue to receive support from the ministry of health and the local government.

MAIN FINDINGS FROM THE KENYA HMM EXPERIENCE

- The HMM project shows that a community approach to malaria treatment works. Even in the most remote areas, providing free, effective medicines to trained local volunteers can alleviate both the malaria disease burden and the strain on health systems.
- Artemisinin-based combination therapy (ACT) policies that limit access to drugs should be revisited. The HMM project in Kenya reaffirms earlier studies that trained community workers can safely distribute and administer malaria treatment.
- Funding is essential to ensure rapid diagnostic tests are available at community level to fulfil the new WHO guidelines concerned with presumptive treatment.
- Training and communication materials used for HMM projects should be culturally appropriate and more readily available to community members, taking account of literacy levels, local languages, and an adequate supply to meet needs.
- An improved supply chain is needed for malaria treatment to ensure uninterrupted access at all levels of the health care system.
- Community level projects like HMM should be designed with sustainability in mind, aiming for long-term impact at the local level.
- Future pilot studies should ensure partnership between implementers and policy makers.

Report and images prepared by Bonnie Gillespie, with the support of Kenya Red Cross Society.

Jumma Kiti / mother **/ Kombeni village**

"What I like best about the project is that it has reduced the distance we have to go to reach the health service. The children seem to get sick at night and usually at the same time, and it is two hours' journey to the health facility. I would have to carry both, one on my shoulders and one in my arms. I still carry them this way but only to the volunteer's house. I am so happy about this project and hope it will continue for a long time."

The challenge: delivering treatment to the most vulnerable

In the fight against malaria, the widespread distribution of long-lasting insecticide-treated nets (LLINs), together with treatment using ACTs and indoor residual spraying (IRS) with insecticides has had an effect on the disease in some countries, but it continues to claim the lives of many people in vulnerable, remote communities, particularly children.

While adequate funding is essential, control of malaria requires local communities to become involved in the fight, as efforts move beyond prevention towards prompt, effective treatment at the household level, building on the success of net distribution campaigns[1]. Many vulnerable communities are found where malaria thrives, yet they have little or no access to health facilities or the financial resources to buy medicine. As a result, caregivers are often too late in seeking treatment for children stricken with malaria. Studies, however have shown that HMM programmes that provide free of charge medication at the household level can increase timely treatment and reduce severe malaria cases by more than 50 per cent[2] and overall childhood mortality by 40 per cent[3].

A large proportion of malaria cases (between 30 and 70 per cent) are treated outside public health facilities[4] and many childhood deaths occur after no contact with the public system. It is common practice to self-treat using over-the-counter drugs, which are often not effective. In addition, in Kenya, the private sector is not regulated, leading to many unqualified practitioners and poor quality treatment. Because of this, providing prompt, appropriate and effective malaria treatment through trained community agents is a strategy to improve access to treatment through early recognition of malaria symptoms in the community or home.

With more than 11.3 million cases recorded annually in Kenya, malaria is the leading killer of children under five years of age. In Kenya, 96 children under the age of five years contract malaria every day[5].

1 *Since 2002, National Red Cross and Red Crescent Societies and their extensive networks of volunteers have protected over 18 million people with long-lasting insecticide-treated nets, saving an estimated 300,000 lives.*
2 *Sirima, S.B. et al. 'Early treatment of childhood fevers with prepackaged antimalarial drugs in the home reduces severe malaria morbidity in Burkina Faso' in* Tropical Medicine International*, Health 8, 133–139, 2003.*
3 *Kidane, G. and Morrow, R. H. 'Teaching mothers to provide home treatment of malaria in Tigray, Ethiopia: a randomized trial' in* Lancet *356, 550–555, 2000.*
4 *In many countries more than 50 per cent of the population does not have access to government health services due to inability to pay for health care, distance and social cultural factors, among other reasons. In addition, when they do reach a health facility, they often find too few staff, lack of effective drugs and poor quality care.*
5 *Ministry of Public Health and Sanitation, Division of Malaria Control, August 2010.*

Community empowerment: the critical factor in combating malaria

In Kenya, malaria is the leading killer of children under five years of age. Malaria often kills childen quickly, soon after the onset of any symptoms. A child can die from malaria in as little as 24 hours after the first symptoms appear, so prompt recognition of symptoms together with timely and effective treatment can be a life-saving intervention. While the appropriate drugs are currently available in Kenya, rapid access to the medication is not so easy, especially in rural hard-to-reach communities, where a public health facility may be at a considerable distance.

As one of the pilot projects for the Community Strategy of the Second National Health Sector Strategic Plan for Kenya 2005—2010[6], the Ministry of Health and Public Sanitation partnered with a number of organizations, including Kenya Red Cross Society and the World Health Organization, to launch an HMM project in 113 villages in Malindi and Lamu districts. It was designed to fill gaps in the health system by using local volunteers to recognize symptoms and provide free treatment with Artemisinin-based combination therapies (ACTs) to children under five years of age. Volunteers would also advise on correct use of long-lasting insecticide-treated bed nets where these had been provided, so ensuring that the prevention message was being broadcast in the communities.

The HMM project aims to determine the best, most effective strategies to ensure fast access to life-saving drugs so that children who fall ill with malaria can receive prompt treatment. In Kenya, after only 12 months, the project has generated convincing results. Results from the records show that there has been increased access to ACTs. Alongside this, education provided by volunteers to their local communities has ensured that treatment-seeking behaviours have improved. Overall, it has indeed filled gaps in the health system, and reduced the burden on local health systems.

6 *Community Strategy Implementation Guidelines, Kenya Ministry of Public Health and Sanitation, 2007.*

10 KEY FACTS ABOUT MALARIA

1. Malaria is a killer disease. It kills nearly one million people a year.
2. 85 per cent of deaths are children under 5 years of age.
3. Nearly 250 million malaria cases are reported every year.
4. Malaria affects 40 per cent of the world's population, putting 3.3 billion people at risk in 108 countries.
5. Children under the age of five years and pregnant women are the most at risk from malaria
6. Malaria consumes as much as 40 per cent of public health expenditure in countries where it is endemic.
7. Malaria is a primary cause of poverty and puts additional burdens on health systems and families.
8. In Africa, mosquitoes that transmit malaria bite from dusk to dawn, so bed nets provide effective protection.
9. There is currently no malaria vaccine approved for human use.
10. Since 2002, as a direct result of net distributions carried out by National Red Cross Red Crescent Societies supported by the IFRC, more than 300,000 malaria deaths have been averted, while 18.2 million people have been better protected against malaria.

Sources: 1-9: World Health Organization, Roll Back Malaria; 10: IFRC

Nelson Kahindi
/ nurse **/ Masheheni**
Health Facility

"I have been here at the facility for ten years. We cover a large area with a population of 27,972 and people travel up to 15 kilometres for treatment. In the past, I remember the area outside under the trees was overflowing with people everywhere, sick with malaria. I referred two children a day with severe symptoms to the district hospital. But now, the workload has come down.

Compared to what I have seen these many years until now, HMM has drastically changed the trend. People would once come to my house throughout the night, but no more. I can sleep! We would see an average of more than 100 patients per day before and now 50 patients is a high workload.

I thank God the serious cases of malaria are no longer here. The community will bear witness to how things have changed, but I can also prove it by showing my records."

Progress towards the Millennium Development Goals

The Kenya Community Strategy demonstrates at a country level the inherent link between many of the Millennium Development Goals (MDGs).

The eight main goals are:
1. Eradicate extreme poverty and hunger
2. Achieve universal primary education
3. Promote gender equality and empower women
4. Reduce child mortality
5. Improve maternal health
6. Combat HIV/AIDS, malaria and other diseases
7. Ensure environmental sustainability
8. Develop a global partnership for development

The vision behind the MDGs is a world where natural resources are preserved for future generations, where men and women have equal opportunities, and where all people have access to health care and education. To achieve this, poverty, hunger and disease must be eradicated.

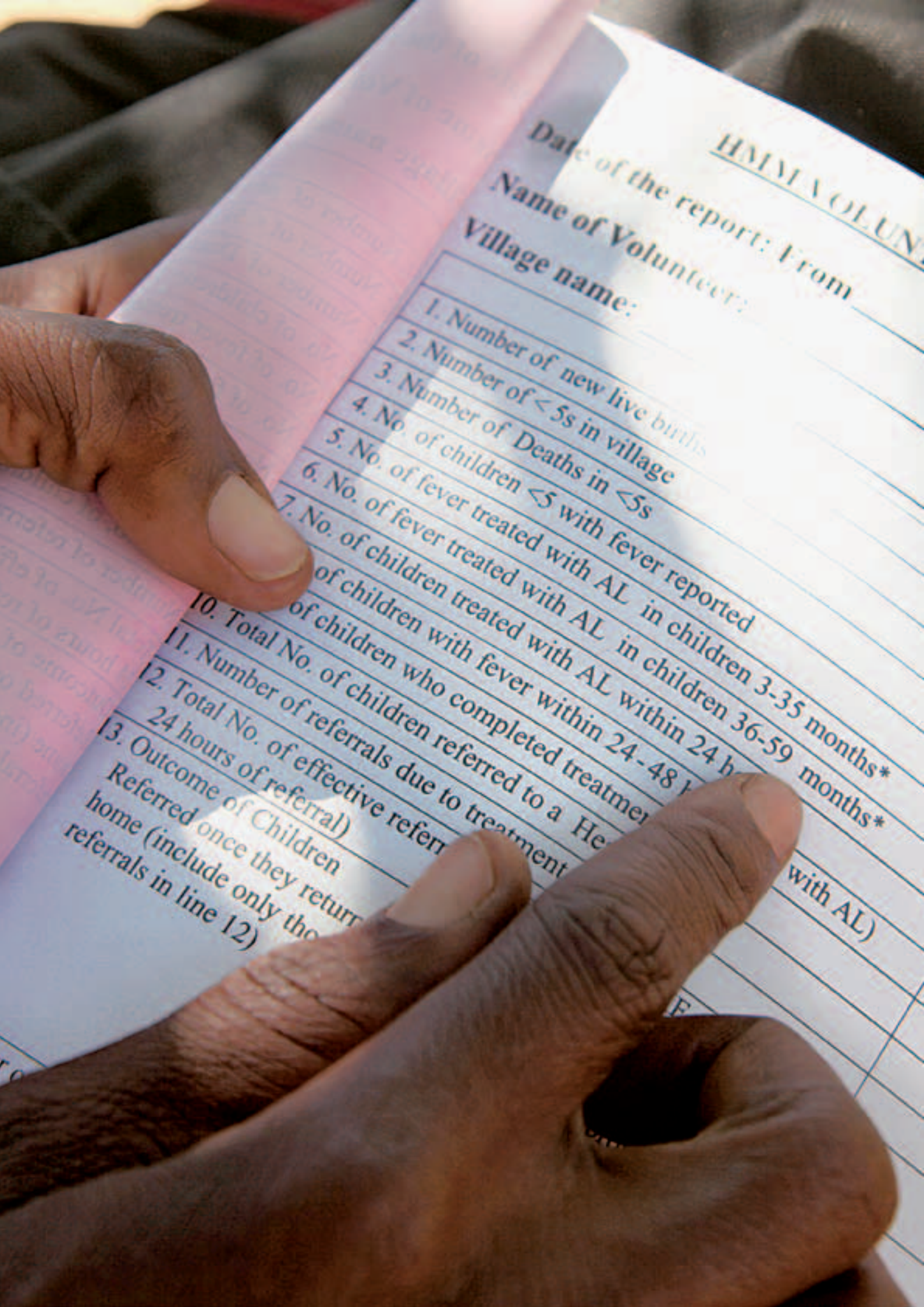
Malaria prevention and effective treatment worldwide remain instrumental in realizing these goals. Malaria control will keep many more children healthy and able to attend school, and will ensure that the local workforce remains well and productive, thus reducing poverty and hunger. It will improve child and maternal health and reduce both child and maternal deaths. With healthy children who can attend school because their parents are productive, education will improve, producing adults who are more able to work towards environmental sustainability.

A healthy population fosters overall economic development. Ultimately, malaria control preserves both lives and livelihoods. It keeps parents at work, children and teachers at school, and helps create the economic and social conditions that eliminate extreme poverty and inequality.

Malaria control and prevention through projects like HMM offer a holistic approach to improve health and development dramatically in even the hardest-to-reach communities, as well as a proven pathway toward achieving the MDGs. We are at the end of the first decade of the MDGs, with five years remaining to their end date. Although slow, all the evidence points to the fact that Africa is making some progress, particularly in childhood immunization, primary school enrolment, both for boys and girls, and gender equality. Progress in the key areas of poverty reduction, employment and most health-related goals is slower, but is being made, and the commitment of governments to the achievement of the goals remains strong.

Jacob Karisa / Kenya Red Cross HMM volunteer **/ Wakala Village**

"Before the project started, I would often see children in my community with convulsions, a sign of complicated malaria. But now since HMM, I have seen no cases of this because the children get treatment. The mothers come to me at the onset now, sometimes in the middle of the night. Malaria is always the biggest problem and I have five cases per week now. My area has a population of 1,011 and some of the villages are really spread out. So I thank God that the Red Cross gave me a bicycle so I can go to the remote areas and come back quickly. It has been very helpful to all the volunteers. The village leaders always invite me to give lectures and give information about health. What I do is educate people on many things about net use, treatment, health, sanitation and the environment. The continuation of the project is very important because of the impact it has had on communities. But it is also a big demand on the volunteers and on our time, because I am also a farmer and a father, so we need support to help manage the balance."


HMM VOLUN
Date of the report: From
Name of Volunteer:
Village name:
1. Number of new live births
2. Number of < 5s in village
3. Number of Deaths in <5s
4. No. of children <5 with fever reported
5. No. of fever treated with AL in children 3-35 months*
6. No. of fever treated with AL in children 36-59 months*
7. No. of fever treated with AL within 24-48 h
of children with fever within 24 h
of children treated with fever treated with AL)
of children who completed treatment
of children referred to a He
10. Total No. of children referred due to treatment
11. Number of referrals due to refer
12. Total No. of effective referrals
24 hours of referral)
13. Outcome of Children
Referred once they return
home (include only the
referrals in line 12)

HMM as an operational research project

Operational research is designed to enable policy change by determining strategies and tools that improve programme quality and effectiveness together with identifying solutions to problems that limit performance. Those strategies, tools and solutions must originate at the local level. Efforts to boost access to malaria treatment through employing an HMM strategy have proven successful in many African countries. By enabling caregivers to recognize the symptoms of malaria and respond accordingly, treatment is sought early, and trained community health workers or volunteers can administer effective treatment outside a clinic setting[7].

The Kenya project aimed to improve access to high quality prepackaged ACTs and was designed to provide concrete information for the roll-out of the national ACT policy. The project was monitored closely, with baseline and end line surveys documenting the effectiveness of the Red Cross volunteers in increasing access to malaria treatment, while assessing the costs of scale-up and implementation. It served as a model for the strengthening of the health system overall by setting up a supervisory and monitoring structure, and by increasing data collection capacity and analysis.

7 *Kidane G and Morrow R. H. 'Teaching mothers to provide home treatment of malaria in Tigray, Ethiopia: A randomized trial' in* Lancet *356: 550–5, 2000.*

Partnership and collaboration for HMM in Kenya

From the beginning, the HMM project exemplified the power of partnership to improve community health and accelerate positive policy change. Kenya Red Cross Society, which offered both an experienced network of volunteers and extensive organizational capacity in health and community outreach, was a natural partner to the MoPHS for a pilot project focused on improving mother and child health in hard-to-reach communities.

With project funding from the Canadian International Development Agency through the Canadian Red Cross and with technical guidance from WHO, the collaborative endeavour to help ensure the availability of ACTs for effective treatment of malaria in remote communities was launched in March 2008. Funding for the ACTs came from a Global Fund to fight AIDS, Tuberculosis and Malaria grant. The programme designated MoPHS public health officers as HMM project "coaches" to work closely with Kenya Red Cross Society project staff and community volunteers.

HMM targeted vulnerable communities in Malindi and Lamu districts, areas with high malaria burdens, low access to health care services, remote locations and high poverty rates. Local Kenya Red Cross branches mobilized, and village leaders were asked to form health committees to consult with residents to find a trusted local person to take on the vital role of HMM volunteer. The Red Cross volunteers chosen worked in their own communities and understood the daily problems and needs of the families, friends and neighbours. They communicated in local dialects and helped to break down barriers to improving maternal and child health. After training, volunteers were provided with special waivers to allow them to give ACT treatment to children under five years of age.

HOW HMM WORKS:
IDENTIFICATION AND TREATMENT OF FEVER

Veronica Mutiso / Red Cross HMM volunteer **/ Danisa village, district of Malindi**

1 Veronica visits a house where Shida Kahindi is worried about her sick child.

2 She makes sure she records the visit, taking the child's name and noting how long he has been feverish.

3 She checks the child and finds that he does have a fever.

4 She registers the child in the fever register book.

5 Veronica takes out ACT treatment, supplied by the Ministry of Health and Public Sanitation, for the child.

6 She explains to Shida when medicines must be administered, and how important it is to finish it all.

7 Veronica shows Shida how to crush the tablets to avoid a young child choking.

8 Some volunteers, like Veronica, help the mother to give the first dose to the child, so that the mother knows how.

Teamwork: public health officers and Red Cross volunteers

Red Cross HMM volunteers received an initial 10 days of training by the MoPHS and Kenya Red Cross Society staff on the concept of HMM, communicating health messages, financial and narrative reporting, data collection, in-depth information about malaria, integrated management of childhood illness, dispensing ACTs and stock management, adverse drug reactions, referrals, and orientation to the International Red Cross and Red Crescent Movement. They continued with refresher training during the life of the project. Volunteers were equipped with a kit of medication and first aid supplies, water purification tablets, record books for data collection, a backpack and a bicycle. They also received a monthly stipend for their services. The retention rate of volunteers in the project was more than 90 per cent; those leaving the project did so in general for personal development reasons, such as education or work outside the area.

Challenges among the Red Cross HMM volunteers were typically resolved through continuous mentoring and supervision by public health officers. Serving in multiple capacities, these MoPHS officers were based in local health facilities and oversaw the work of up to 12 HMM volunteers in addition to their regular job responsibilities. Using motorcycles, boats or other transportation provided by Kenya Red Cross Society, the coaches visited volunteers regularly to assess performance, collect records and replenish stocks of ACTs. The mentoring role proved to be a critical link in the HMM project, as it helped ensure credible monitoring for operational research and, with the extra responsibility at community level, gave public health officers opportunities to address other local concerns.

Trained Red Cross HMM volunteers initially struggled to gain community recognition as health providers, particularly since they continued to work as farmers or fishermen or in bringing up a family. At the beginning of the project, local residents also frequently requested other medicine besides ACTs, and in this case, HMM coaches helped clarify the volunteers' role with village leaders. If a child aged between three and 59 months had fever, the HMM Red Cross volunteers provided ACTs, and followed up by ensuring that the correct dosage was administered and that it was completed, a message that they communicated constantly. Once work in malaria treatment proved effective, the coaches helped expand the volunteer health services to include oral rehydration salts (ORS), Albendazol for treatment of intestinal worms and other remedies for common health issues. Red Cross HMM volunteers also served as health educators, encouraging prompt treatment-seeking, the correct use of LLINs, the importance of routine vaccination, antenatal visits and good health and hygiene practices. The volunteers carefully documented the number of cases of malaria in the community and how soon treatment was sought by caregivers, along with other health-related data for local children.

Changing community lives through improved community health

Before the HMM project started, mothers and caregivers in HMM-targeted communities typically walked more than two hours to the nearest health facility if their child was suffering from malaria. Some villages in Lamu were only accessible by boat and could be cut off entirely during the rainy season or high tides. Transport costs, both land and sea, were often unaffordable for the rural poor, and with health services out of reach or of low quality, children often failed to receive prompt treatment. Many died as a result. With the HMM project, the lives of mothers and children in these vulnerable communities changed dramatically. Immediate free of charge care became available within their village. Instead of delaying for hours or even days before taking the long walk to the nearest health facility, mothers could find the local Red Cross HMM volunteer within a few hundred metres. The vast majority of caregivers began seeking treatment as soon as symptoms began, and as a result, children recovered quickly and cases of severe malaria rapidly declined. Mothers were able to continue their household work and tend to other responsibilities instead of constantly caring for ailing children.

At rural health facilities, the impact of the HMM project was equally remarkable. The influx of malaria patients often experienced during high transmission times lessened noticeably, while cases of severe malaria dropped to near zero in areas covered by HMM. If Red Cross HMM volunteers encountered complicated illnesses of any kind, they were equipped with special referral forms for health facilities and hospitals which ensured patients were seen quickly by a nurse or doctor. Many health facility workers also reported finally being able to sleep through the night without being woken by a concerned parent holding a feverish child. Instead, trained Kenya Red Cross HMM volunteers were on call for their community around the clock. Navigating tropical terrain and dodging wild animals even on moonless, rainy nights, these volunteers proved tireless in their commitment to their communities.

Mary Teresa Mogeni /
Red Cross HMM volunteer **/**
Lamu

"A child came to me about noon today with symptoms that began yesterday. The fever is already down. I follow up to make sure children are being given the correct dosage. The community appreciates my help. People walk quite large distances to come to see me. I was trained as a nursery school teacher, but the previous volunteer told me what a good experience it is to be able to help people and so I went to be trained. Now people come to see me every day, even in the middle of the night, looking for advice for all kinds of problems. I am able to give them referrals. Malaria is not so big a problem any more, not like it was before. This month I have had only had a few cases. One of my biggest challenges is that we need medicine for children over five years of age and adults, because they are also suffering. Many people use mosquito nets, but there are still not enough here for everyone."

Munga Gulani / public health officer and HMM project coach **/ Marafa Division**

"I am a coach for HMM and my job involves seeing that the HMM volunteers are equipped with ACTs, checking that they are going to the communities to treat and follow up children with fever, checking their documentation and generally supervising all their activities. At first, the supervision was intensive to help them keep up with the record-keeping and to encourage them to grasp what they were working towards. We worked hard to make the community aware of the programme, and once they learnt the programme was so worthwhile they started coming to the volunteers in huge numbers.

As a public health officer, I do a lot of work in malaria, and now that we are working hand in hand with the Red Cross Society, that link between us is important. Without cooperation of this kind it would be very, very difficult to operate this project. But even now, the areas can be huge, and some volunteers have to treat hundreds of children. So we need a big increase in volunteers so they can do this full time. HMM is a blessing for government, and our Red Cross motorbikes help us get all of our work done as public health officers as well."

IMPACT DATA: KEY ACHIEVEMENTS OF HMM

82.1 PER CENT OF REPORTED FEVER CASES WERE TREATED WITHIN 24 HOURS, AND DOSAGE COMPLIANCE FOR ACT WAS 70 PER CENT.

HMM in Kenya has generated significant results to promote expansion of the strategy to hard-to-reach malaria endemic regions nationwide. Past research demonstrated that mothers or caregivers are the first to recognize fever, the decision to seek care is made within the home, and communities can be trained to recognize malaria and respond appropriately[8]. In HMM project villages, treatment of children with ACTs within 24 hours of fever onset increased by 21 per cent in one year, and more than 70 per cent of caregivers were aware that fever is a symptom of malaria.

A baseline survey for this project was conducted between November 2008 and January 2009, together with an end line survey twelve months later. Results show that the use of Kenya Red Cross Society volunteers in partnership with public health workers improved access to ACT for fever management, increased the access and use of LLINs in the population, improved uptake of intermittent preventive treatment (IPT) among pregnant women in the community and improved early treatment-seeking behaviour among female caregivers. HMM is most effective where malaria is one of the common causes of fever and where physical access to health care is difficult

8 *Kidane G and Morrow R. H. 'Teaching mothers to provide home treatment of malaria in Tigray, Ethiopia: A randomized trial' in* Lancet *356: 550–5, 2000.*

Red Cross volunteers and community health workers as main source of advice on treatment

Baseline %	Endline %	Change +/–
1.8%	36%	34 increase

Red Cross volunteers as source of ACT treatment for children below 5 years of age

Baseline %	Endline %	Change +/–
0%	45%	45 increase

Increase in attendance at antenatal care clinics by pregnant women

Baseline %	Endline %	Change +/–
62%	66%	4 increase

Children adhering to three-day ACT treatment course

Baseline %	Endline %	Change +/–
61%	70%	9 increase

Children slept under a LLIN the night before

Baseline %	Endline %	Change +/–
56%	67%	12 increase

Caregivers aware of new antimalaria campaign being promoted by MoPHS

Baseline %	Endline %	Change +/–
25%	33%	8 increase

Mwanaisha Balla / mother / Lamu District

"I have four children, but one is away at the farm. They have all had malaria recently and were shivering and vomiting, so I took them to the Red Cross volunteer. Before the volunteer was here, I would take them to one of the health facilities. The nearest is not too far – only a six hour walk. I would like to have our volunteer fully trained as a doctor so she could vaccinate the children and also treat adults who are sick."

Challenges and solutions

While it remains evident that the HMM project in Kenya is a success, the project has not been without its challenges. The MoPHS, Kenya Red Cross Society and their partners have worked together to overcome many of these obstacles and resolve issues wherever possible. Many problems were solved at the time, particularly the practical ones such as addressing literacy levels and potential loss of income. Other obstacles remain a challenge for the future, such as weather conditions, underdeveloped roads and transport systems. Access to sustainable funding will always be a major challenge.

Challenge	Solution
Sustainability: funding issues, access etc.	Funding remains pivotal, but even the most remote communities have been empowered to take charge of their own health and a sense of community ownership of the project has been cultivated. Success in malaria control depends on sustained funding.
Policy changes: ACTs require a prescription, and in March 2010 WHO launched new diagnostic guidelines recommending malaria diagnosis before treatment.	A special waiver was obtained for trained HMM volunteers to dispense ACTs, but with the project serving as operations research for the MoPHS, the potential persists for some deregulation of the drug. Funding remains unavailable to begin roll-out and widespread use of Rapid Diagnostic Tests (RDTs) in Kenya.
Adverse drug reactions: possible negative reactions to ACTs were of immense concern during the project planning phase.	HMM volunteers were trained to identify adverse drug reactions and empowered to refer these cases quickly to the health facility. Since project launch, there have been no confirmed adverse drug reactions, underscoring arguments to deregulate ACTs.
Community misperception: HMM volunteers were trained but were not doctors; initially they were only able to dispense one drug and only to children under five years of age.	HMM coaches intervened, assisting in community education regarding capacity and mandate of HMM volunteers. After additional training, volunteers were allowed to dispense other medications for common, uncomplicated ailments and supply basic first aid. Special referral forms enabled HMM volunteers to expedite services for clients of all ages at nearby health facilities.
Logistics: unpaved roads in remote areas flooded during rainy season; other areas accessible only by boat are isolated by high tides; wild animals proved menacing, particularly during night time house calls.	HMM volunteers were issued with bicycles to help with transportation issues, while HMM coaches received motorcycles that allowed them to make regular supervisory visits in villages. A Red Cross boat was also available for use in isolated coastal areas, but weather and flooding persist as rainy season challenges.
Coverage areas: some HMM volunteers are stretched by growing populations and large coverage areas; neighbouring villages without HMM services complain that they are unable to receive treatment.	It is necessary to expand the project, increase number of volunteers and amount of supervision by MoPHS staff.
Low literacy levels: a few volunteers in rural areas had a low level of literacy and initially struggled with the record-keeping aspects of the HMM project.	HMM coaches spent extra time with these volunteers and trained them thoroughly on accurate data collection, boosting their overall literacy levels.
Loss of income among volunteers: serving as the HMM focal point in a community is a time-consuming job and often volunteers were unable to perform their regular jobs such as farming, which resulted in lost incomes.	After grappling with this issue for months, HMM project leadership determined that both volunteers and coaches would begin receiving small stipends to assist in compensating for the extensive time spent on HMM activities. Additionally, many volunteers pooled a portion of their resources to start income generating activities (IGAs) to help assist in sustaining the work of the project and supply supplementary income.


Kenya
Red Cross
Action Team

HMM success in Kenya: local solutions to a global problem

Partnership

The partnership between MoPHS, Kenya Red Cross Society, Canadian Red Cross, WHO and the Kenya Medical Research Institute was critical to the success of HMM and proved one of the hallmarks of the project. Collaboration between the organizations provided a direct link from the operational research results of the project to policymakers, helping to ensure sustainability and evidence-based decision-making. This teamwork is an exemplary partnership model for a development initiative, demonstrating how, when different organizations work together from project inception, they can pool human, financial and infrastructure resources and work together towards a common goal.

Community empowerment

From the beginning, the HMM project fostered a sense of community empowerment and demonstrated that local people can indeed take charge of their own health. At each stage, from village selection of the HMM volunteer, their comprehensive training and implementation of the programme, and the income generating activities they later initiated, HMM's achievements hinged on community ownership of the project. For malaria control programmes to succeed, community engagement is essential and will help ensure that efforts like HMM have long-term sustainability.

Holistic approach to health

Through the work of the Red Cross volunteers, the HMM project embodies a holistic approach to health and demonstrates how simple interventions can dramatically improve maternal and child health. Not only do volunteers link prevention and treatment of malaria through community education and ACT provision, but they are also trained to provide other basic medications and water purification tablets. The HMM volunteers encourage expectant mothers to seek antenatal care and are equipped with referral forms for local health facilities to address serious issues. Their work increases local access to health care, alleviates the burden on already taxed health systems and generates income locally.

Operational research

Before launch in Kenya, the HMM concept had proven successful in other countries with high burdens of malaria, but more operational research was still needed to inform programming. Once adapted for a local context and designed collaboratively by the MoPHS and Kenya Red Cross Society, the HMM project was relevant from the outset, providing an evidence base for future decision-making and to inform effective policies. This type of proven programming is needed to reduce malaria burden, to improve mother and child health, and promote scale-up for increased impact in high-burden areas.

MINISTRY OF HEALTH

Serial No. 033166

CHW's Referral Form

Section A (Client's data)

Patient/Client BRYAN MASHA Date 13/5/2016

☑ Child ☐ Adult

☑ Male ☐ Female Age 17 M

Community Unit (CU) DAGOTHA

Link Health facility for the CU SOSONI DISPENSARY

Section B (Reason for referral)

ductive ☑ Child ☐ TB ☐ HIV/AIDS ☐ Others

oblem Fever, septic skin infection

nt Given AL 6, Panadol ½ + 6 x 2½

d to SOSONI dispensary.

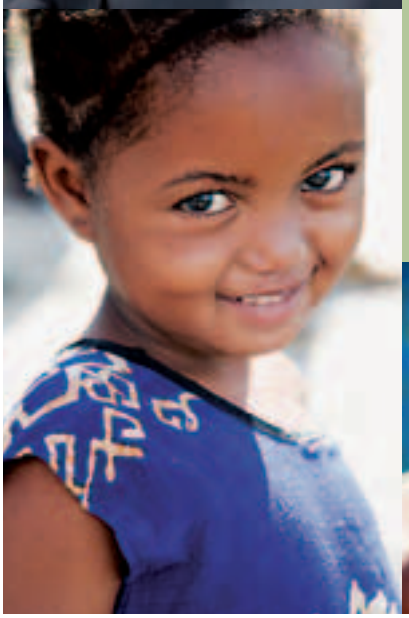
nts

Section C (CHW referring)

CHW VERONICA MUTUA

Section D (Receiving officer)

eceiving officer



BEATING MALARIA: THE WAY FORWARD

1. Make sure sustainable funding is available to carry the success forward. Recent history in the elimination of other diseases has revealed that funding gaps lead to reduced efficiency which can lead to resurgence of diseases. Malaria can be prevented and cured.
2. Strengthen the civil society response. Malaria will be defeated by empowering communities with the knowledge and materials needed to prevent and treat this disease. Empowered communities can ensure sustained access to prevention and treatment materials from their ministry of health and local government.
3. We call for greater recognition, support and investment of community-based solutions and action. We need to ensure continued support at community level to protect gains already made in the battle against malaria.
4. Invest more in operational research. Medical research is necessary but more research is also needed to allow for data-driven, efficient, and cost-effective malaria programmes on the ground.

Beyond prevention:
home management of malaria in Kenya

For more information on the IFRC malaria programme, please contact:

In Geneva

Jason Peat
Senior health officer, malaria
Tel.: 41 79 201 1643
E-mail: jason.peat@ifrc.org

Media and public relations contacts
IFRC's media service
E-mail: media.service@ifrc.org

In Brussels

Aude Galli
EU malaria policy and advocacy manager
Red Cross and Red Crescent European Union Office
E-mail: ag@redcross-eu.net

The International Federation of Red Cross and Red Crescent Societies promotes the humanitarian activities of National Societies among vulnerable people.

By coordinating international disaster relief and encouraging development support it seeks to prevent and alleviate human suffering.

The International Federation, the National Societies and the International Committee of the Red Cross together constitute the International Red Cross and Red Crescent Movement.

201800 08/2010 E