

Home and community management of malaria: the sometimes forgotten component

Much malaria management takes place at home against a syndromic self or parental diagnosis. Professor William Brieger discusses how to bring this segment into the care framework

As we rush towards targets for universal coverage (UC) of malaria interventions before the end of 2010, we need to take stock of which are the best strategies or mix of strategies to promote those interventions.¹ A good example is case management (CM) of malaria.

By CM we mean all those actions and commodities needed: (a) to diagnose the sick person's condition, (b) to provide that person with the appropriate medicines and support therapy in a timely manner, and (c) to counsel that person on the correct completion of the treatment regimen. In short, we must remember that CM is more than handing out anti-malaria drugs to people who appear to have malaria.

To date, major emphasis of large-scale CM programmes funded by the likes of the Global Fund to fight AIDS, TB and Malaria (GFATM) has been to strengthen the distribution of artemisinin-based combination therapy (ACT) malaria drugs through public health facilities. Achievements reported to date show that this strategy has not achieved anything close to the Roll Back Malaria goals of treating 80% of people who have malaria by the end of 2010. What has been missing is both recognition of the fact that much of malaria CM occurs in the home, and that the household obtains many of the medicines they use in the community through the informal private sector, also known as medicine shops or patent medicine vendors (PMVs).²

This recognition of a home and community role in CM has led to the development by many, especially those in the health research and NGO sectors to develop models for what is now called community case management (CCM), although the terms home management of malaria (HMM), home-based care (HBC), and home based management (HBM) are also used. What is meant by such terminology is the management of malaria illness *in* the community *by* community members. Such community members are often known as volunteer community health workers (CHWs)³ and by definition they not only work *in* the community, but come *from*/are members of the community.

In this article we are exploring the background

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or history of CCM, its current manifestations and the challenges it faces in becoming a major contributor to achieving and sustaining UC into the foreseeable future – this is how CCM can help move endemic countries along the pathway to malaria elimination.

Home management of illness and even promotion of health often falls under the rubric of self-treatment or self-care.⁴ People engage in self-care for many reasons including economics/cost, convenience/access, and perceived problems with the quality of formal health care services. There is another important element, that of personal control – people like to have the ability to make healthcare decisions for themselves and act on these. Even if we eliminate the problems of cost, access, and poor quality, there will still be a large number of people who see an intrinsic value in self-care. Our job therefore, is not to try to eliminate self-care, but to make it more appropriate and safe.

Prior to the advent of orthodox medicine, community members have had their own compendium of medical knowledge consisting of herbs, abstinence from certain behaviours, and sacrifices, among other indigenous 'technologies'.⁵ When Western or orthodox drugs became available, particularly over-the-counter, these were incorporated into existing self-care practices of communities.⁶ Thus CCM is not something new. In fact the Alma Ata Declaration on Primary Health Care (PHC)



A community health worker comes to the dispensary to replenish her kit



Community health workers can provide IPTp (Intermittent Preventative Treatment of malaria during pregnancy)

promotes the idea of community-based care – the difference is that PHC should be both scientifically sound as well as culturally acceptable.

Alma Ata of 1978⁷ was followed by many schemes to make appropriate malaria treatment available through CHWs and community efforts such as revolving drug funds and simple drug boxes. Those were the days when chloroquine was cheap and easily available. Because it was cheap, chloroquine was given out based on a clinical diagnosis of malaria signs and symptoms – or what is called presumptive treatment. Unfortunately CHW–CCM schemes of those days were often small scale, sponsored by NGOs, faith-based organisations (FBOs) and hospitals, and to some extent government health services. These schemes were often not well integrated into the overall healthcare system and suffered from supply and management problems.⁸

Along came the Bamako Initiative (BI) in 1987.⁹ BI attempted to formalise community access to medicines by creating community management committees and cost-recovery that would guarantee that the committees and the local government health services who supervised them could always buy replacement drugs. BI was probably most successful in Mali, whose capital is Bamako, and a few neighbours like Burkina Faso, Guinea, and Benin.^{10,11} Community committees oversaw local health centres and posts, and CHWs had the capacity to provide CCM using chloroquine.

This scene also changed as endemic countries, one-by-one over the past 5–6 years adopted ACTs as their main first-line drug for malaria CM after malaria parasites developed resistance to the cheaper chloroquine, and subsequently sulfadoxine–pyrimethamine. For example, in Burkina Faso, CM by CHWs stopped once ACTs were introduced as first-line treatment. Burkina Faso, like other endemic countries, is now trying to decide how to reintroduce CCM with ACTs.

In the meantime, Unicef, WHO/TDR, and the CORE

Group¹² are fostering an integrated approach to CCM (ICCM) that includes malaria, pneumonia, and diarrhoeal diseases. In some cases treatment of neonatal infections is addressed. Research on feasibility and effectiveness of reaching people in need through ICCM has started. The results of these studies may not be available for 3–5 years. In the meantime massive distribution of ACTs is underway to achieve UC by the end of 2010. We cannot wait.

What do we know already? Communities are capable of handling a wide range of health and development issues.¹³ We know that community members can be trained to manage common illnesses. For malaria, we even know that community members can be trained to use rapid diagnostic tests successfully.¹⁴ We also know that PMVs can accurately dispense prepackaged anti-malarial and other drugs successfully if trained and supervised, and if the appropriate medicines are made available to them. This means that countries need to decide whether ACTs will

be re-classified as over-the-counter, as has been done in Nigeria, or restricted to only trained and licensed clinicians.

In short, the community is capable, but will policy makers and programme managers enable them to become full partners in malaria CM? A recent study by Unicef reported at the 5th Pan-African Malaria Conference in Nairobi identified a number of attitudinal and perceptual bottlenecks to ICCM on the part of health officials. Common concerns were the ability to guarantee quality of care, incentives, supplies, monitoring and evaluation, training, and supervision. These are similar to concerns raised about CHW schemes throughout the years.¹⁵ If overall ACT procurement and supply manage-



CHWs can compliment Rx and teach ITN use

ment (PSM) problems have plagued provision of ACTs in the public arena, the problem of getting these down to the community or out to PMVs will be even more challenging.

PSM is not an inherent weakness of CCM; it is a challenge to the overall health system. PMVs do have a way of getting through larger retailers and wholesalers the medicines they want to sell, usually based on popular demand. This system can move ACTs, but the problem is that many ACTs in the system, though approved by national food and drug regulatory agencies, do not have pre-qualification approval by WHO. Some are counterfeit or expired. A new programme called Affordable Medicines Facility, malaria (AMFm)¹⁶ is endeavoring to provide country grants to strengthen availability of low-priced approved ACTs in both public and private sectors.

In the meantime we need to consider the mechanisms that will get ACTs out to trained CHWs on a regular basis. Previous relatively small-scale efforts by NGOs, FBOs, researchers, and pilot government programmes will not achieve the scale needed for UC. If we look around, we will find that the African Program for Onchocerciasis Control (APOC) has developed a platform for annual ivermectin distribution that has literally reached 100 000 villages regularly for over 12 years. WHO/TDR-sponsored research has determined that the Community Directed Treatment with Ivermectin programme can be turned into a Community Directed Intervention (CDI) approach that can accommodate additional interventions like malaria CM, insecticide-treated net (ITN) distribution, and vitamin A distribution.^{17,18} In fact agencies working on neglected tropical diseases have already been using CDI to distribute medicines for trachoma, lymphatic filariasis, and geo-helminthes.¹⁹

What is special about CDI is that the community becomes a full and active partner. The idea of the CHW takes second place to community decision making. The community decides who and how many volunteers will be involved. Possibly Mr X can be asked to be in charge if distributing ITNs and Mrs A can handle malaria CM. The CDI system has been shown to achieve better coverage results than the existing health systems alone.



CHWs who distribute Ivermectin near Buea and also provide malaria community case management

In fact, what is good about CDI is that it is not an isolated pilot effort. It is integrated into the health system. Front-line health staff are trained to organise and support CDI, so that it becomes a natural extension of their public health efforts. Health staff mobilise the communities to participate in CDI, and they train the volunteers selected by the community. The front-line health facility becomes the supply store for all the commodities needed for CCM and disease prevention efforts. Villagers are trained to maintain records and submit these to the front-line health worker for collation and onward transmission so that all community-level intervention gets measured as part of national efforts to achieve UC.

A lesson from APOC is that CDI can be labour intensive to set up. Once it is up and running, the community partnerships it offers are the only way to sustain efforts to reach the communities 'beyond the end of the road.' It is this ability to sustain intervention with ACTs that is needed to take malaria CM beyond scale-up and into the sustained programming that will reduce prevalence and mortality and take us into the era of malaria elimination.

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5th Pan African Malaria Conference

Professor William Brieger reports from Nairobi

Speakers at the 5th Pan-African Malaria Conference of the Multi-lateral Initiative for Malaria (MIM) frequently traced the history and progress of the event. Comparisons between the 2000 participants in Nairobi from 1–6 November to the two dozen delegates at the first conference in Dakar were an obvious place to start. Another sign of progress was at the organisational level where this meeting represented the first time the MIM Secretariat had been based in Africa – the Africa Malaria Trust Network in Tanzania.

The conference also demonstrated that there is a strong new generation of malaria researchers who are ready and able not only to identify new tools that will help eliminate the disease but also to determine new delivery and management mechanisms to guarantee successful implementation of these tools. Thus, the conference represented a healthy convergence between basic and operational research.

An important feature of the conference is the accessibility of the information presented to the wider, global malaria community. The book of abstracts from scientific and poster sessions is easily accessible on the MIM Conference website <<http://www.mimalaria.org/pamc/>>. TDR's TropiKA website provides daily summaries of plenary sessions and the numerous symposia <<http://www.tropika.net/>>. A virtual press room was also established, and contains important documentation of events and press releases <<http://mim.globalhealthstrategies.com/blog/>>. The Roll Back Malaria (RBM) World Malaria Day 2009 website is also a source of information on the wide variety of events <<http://www.worldmaliaday.org/>>. One can also find highlights discussed on the Malaria Matters website <<http://www.malariafreefuture.org/blog/>>. In short, while you may have missed the vibrancy of the conference, you can still access the important updates on malaria research that were shared.

The first plenary session framed malaria in the context of a crosscutting health issue whose control and elimination is essential to achieving at least five of the Millennium Development Goals. The session not only outlined research to discover new tools, including drugs and insecticides, but also stressed the need for strong surveillance, monitoring, and evaluation systems to ensure appropriate coverage and functioning of these interventions.

The second day's plenary began with a reality check – funding will not flow without evidence that interventions are working. Even with evidence, strong advocacy efforts are needed from the grassroots upwards. Cautions were also aired on the manner by which we gather and use research evidence with questions raised on how well equipped we are to deal with the ethics of conducting population based or public health research.

On the third day, the plenary explored how the successes achieved to date can pave the way to elimination and eradication. Case studies of efforts in Bioku (Equatorial Guinea), Zanzibar, and Rwanda afforded participants a glimpse into the possible, and while these are admittedly small and relatively contained areas, the lessons from using a multiple and integrated intervention approach hopefully can be applied to help other countries along the pathway to elimination. This session also provided an opportunity to stress the importance of evaluation and feedback to re-strengthen programmes as they are implemented.

Plenary Session 4 ranged widely in topic from partnerships in guaranteeing access to malaria treatment to immune responses to the disease. What excited the participants most were reports on malaria vaccine trials with special focus on pre-erythrocytic vaccines such as the RTS,S. Over 5000 children have been enrolled in Phase 3 trials so far, with a goal of 16000. While the vaccine so far does not confer high levels of immunity and needs to be given in three doses, it has been shown to curb severe malaria and will eventually become another tool in the wider malaria control arsenal.

The final plenary session reviewed a continual theme of the conference – building research and development capacity throughout Africa. The contribution of genomic research was presented to help understand, for example, how malaria affects pregnant women, but more broadly in terms of how resistance in both parasites and mosquitoes develops and can be prevented with new control tools.

The closing ceremony marked another important milestone for MIM. At the end of the conference, the MIM secretariat was successfully passed to another African institution, this time based in Cameroon. The new MIM managers promised an exciting and informative 6th Pan-African Malaria Conference.

