

Participatory communication in malaria control: why does it matter?

Community level communication can engage the most vulnerable people in strategies to prevent and treat malaria

Introduction

Current malaria control strategies rely predominantly on individuals and communities to take action to protect and treat themselves. Such strategies will only succeed if there is effective communication and genuine understanding around the causes, symptoms and means of preventing and treating malaria to protect the most vulnerable people. These are children under five years of age and pregnant women in the poorest communities in Africa, who have little or no access to interventions such as bed nets or formal healthcare services. Communication at this level has to go beyond message delivery and social marketing to a genuine exchange of understanding between agencies and local people as to what will work best in the local context.

This paper is not a comprehensive literature review, but an attempt to give a flavour of current approaches to malaria control, focusing on effective ways of engaging with local communities in participatory ways.

Current malaria control strategies

The Abuja Declaration in 2000 reaffirmed international commitment to roll back malaria and called upon member states in Africa to undertake health system reforms, including promoting community participation in joint ownership and control of the Roll Back Malaria alliance (RBM). The Abuja goals include ensuring that 60% of those with malaria have access to treatment within 24 hours of the onset of symptoms, at least 60% of at-risk pregnant women receive preventive drugs and at least 60% of at-risk groups sleep under bed nets (The African Summit on Roll Back Malaria, 2000). RBM is an international alliance of more than 90 organisations – including WHO, UNICEF and the World Bank – and is the main instrument through which African leaders were hoping to achieve these goals.

Vertical malaria control programmes of the 1970s focused on indoor residual spraying, uniformly applied across continents. Shifting from 'eradication' to 'control', today's approaches are more horizontal, with malaria control integrated into the primary health care system and relying on the participation of local people. While there is a strong lobby for the inclusion of insecticide spraying to eradicate mosquitoes, as successfully carried out in various parts of the world (Africa Fighting Malaria, 2004),

Key points

- Communication is an essential part of malaria control.
- Current malaria control strategies depend on individual and community action so a focus on human as well as mosquito behaviour is critical.
- Strategic communication should be a key component of malaria control programmes and include participatory approaches to communities.
- Effective communication between local community members, researchers, programmers, and health ministry personnel is critical.
- Genuine participatory communication takes time and resources so requires international commitment.

Roll Back Malaria's strategy depends mostly on insecticide treated bed nets (ITNs) and early treatment with combination drug therapy.

These approaches rely on individual and community understanding and action. Nets must be hung by the user and many still need to be impregnated at timely intervals, often at the user's expense (Spielman, 2003). Long lasting impregnated bed nets that can be used up to five years without re-treatment exist, but are not yet widely available across Africa (UN News Centre, 2003). Those ill with fever are responsible for taking action to diagnose and treat malaria, with increasingly expensive drugs.

Treatment

More than half the children who die of malaria do so within 48 hours (WHO, 2005a). Therefore, fast and appropriate diagnosis and treatment of malaria would significantly reduce mortality and morbidity.

Up to 82% of all malaria episodes in sub-Saharan Africa are treated outside of the formal health sector (WHO, 2002). People often use combinations of traditional and biomedical treatment (Heggenhougen, Hackethal and Vivek, 2003 chapter 4) and there is often a 'hierarchy of resort' where, if one treatment fails, people turn to other remedies (McCombie, 1996).

Most people at risk of malaria do not have access to effective health systems and RBM promotes 'Home

Management of Malaria' to make treatment as near to the home as possible (WHO, 2005a).

How and when people seek treatment for fever is critical. People act logically to treat the symptoms of fever and, in their view, solve the problem.

The biggest challenge is to find a way to make people understand that they need to treat the disease malaria, not just a fever. Most mothers take the most important action for their ill children within 48 hours, for example, with aspirin or antimalarials. Building on this action is an important activity for those working in malaria control and communication strategies around treatment should focus on ensuring mothers give the right drug and complete the course (Haaland, 2005). Often people do not take the correct dose, stopping the treatment when they feel better and keeping tablets from one course for the next time someone is ill. This increases the likelihood of drug resistant malaria developing (Heggenhougen, Hackenthal and Vivek, 2003 chapter 4).

An important study in Uganda showed that 90% of people adhered to the right treatment when given a pack with clear instructions and advice from a health worker (Fogg, 2004). This highlights the importance of good interpersonal communication combined with accurate information.

There are also broader issues to consider. The ways in which people treat fevers are often directed by local beliefs about disease, local opinion leaders, gender roles and relationships, access to treatment, and attitudes towards healthcare providers. It has been shown, for example, that women's access to resources and their bargaining power within the household have significant influence on their treatment-seeking behaviour for children with malaria (Malaria Knowledge Programme, 2005). Also, the cost of antimalarial drugs for those affected is increasing as new effective combination therapy that includes Artemisin has raised the price of treatment.

Previous advice was to treat all fevers as malaria, but rising costs means this is impossible. Accurate diagnosis of malaria then becomes essential to treat the disease properly (Barnish, Bates and Iboro, 2004) and to diagnose other life threatening diseases like meningitis and pneumonia (Amexo, Tolhurst, Barnish and Bates, 2004).

Prevention

Trials of bed nets have consistently shown reductions in overall childhood mortality (Lengeler, 2004). Unfortunately, bed net use in Africa is low. A survey of 34 African countries in 1999 to 2004 showed that only 3% of under-five year olds sleep under bed nets (WHO, 2005b).

There are some positive signs. RBM states that bed net distribution has increased ten fold during the past three years in more than 14 African countries and some countries such as Malawi have seen substantial progress (WHO, 2005b). Uganda has also experienced recent success with a mass net re-treatment exercise (Wamani, 2004).

The most vulnerable people are the hardest to reach. Relatively wealthy urban households are more likely to own

bed nets than rural and poor households, where people are at a higher risk of malaria. As most people struggle to buy even subsidised bed nets (Choi, 1995), social marketing campaigns work better in areas where people are wealthier. Controversy exists over whether bed nets should be distributed free of charge to poor people or through varying levels of subsidy (Curtis, 2005). There are clearly resource constraints around providing free bed nets, so any distribution should aim to reach remote populations and people who cannot access nets in any other way (White, 2005).

Even if mosquito nets are practical and cheap, they can still fail with target communities. If the bed net is not perceived as an effective intervention people are more likely to misuse, sell, exchange, discard or transform it. In Africa mesh bed nets have been turned into wedding dresses, fishing nets and water filters (Bean, 2001). Bed nets can be too hot to sleep under in humid climates. They will also fail if the peak hours of biting occur when people are still awake (Choi, 1995).

Although children and pregnant women are at the highest risk of malaria, men may use nets instead of more vulnerable groups (Makemba, Kamazima, Makame, Sengo, Lubega, Minjas and Shiff, 1995). Re-treating nets is difficult when community members cannot afford or access re-treatment kits, have suspicions over toxicity and lose enthusiasm after initial project implementation (Heggenhougen, Hackenthal and Vivek, 2003 chapter 6).

Communication strategies focusing on bed net use need to take into consideration these many constraints and interact closely with communities to understand their perceptions of malaria and find appropriate ways to prevent it.

Community action

Community based approaches are often seen as 'soft' compared to vaccine or drug development, but in reality a whole package of approaches is needed (Feek, 2005). There are many examples where community action has been successful. In a community in Tigray, Ethiopia, mothers act as co-ordinators to recognise and treat malaria, and childhood mortality has reduced by 40% (Kidane and Morrow, 2002). In rural Kenya, shopkeepers have received training to recognise malaria and dispense appropriate drugs. In one community, the treatment of childhood fevers with adequate doses of chloroquine has risen from 3.7 to 65% (Marsh, 1999), while in several Latin American countries networks of volunteer workers have been established to detect malaria cases.

These networks have become a mainstay for malaria surveillance and anti-malarial drug treatment in many malaria control programmes (Ruebush and Goody, 1992 and Ruebush et al, 1994).

Social science approaches

Supporting community level action requires a solid understanding of social factors, from the individual level to the larger social, economic and political factors that

“The solution to the malaria problem lies where it is most keenly felt – at community level” (Jonsson, 2003)

influence the local context. Social factors in malaria have been neglected compared to the focus on mosquitoes and parasites (Heggenhougen, Hackenthal and Vivek, 2003, introduction) and the shift towards a social science approach over the last decade is significant.

At community level, anthropological studies play a vital role in helping to understand people, their attitudes toward health and ill health, and their concept of an acceptable health care programme.

"Doing qualitative research and understanding a community's beliefs and behaviour is critical to the success and sustainability of community based malaria programmes" (Heggenhougen, Hackenthal and Vivek, 2003 chapter 8). However, the 'micro-climate' that influences decision making is often not considered at programming and operational stages (Heggenhougen, Hackenthal and Vivek, 2003 chapter 8).

Social science knowledge and practice can contribute to a multidisciplinary approach, yet few African social scientists are integrated into malaria control (Ngalame, Williams, Jones, Nyamongo, Diop and Gaspar, 2004).

The public health aspects of malaria control have been weak and there are no structures to host a multi-disciplinary approach, either in universities or in ministries of health or education. Scientists or public health specialists take their own initiative to engage in multi-disciplinary research.

Often the knowledge and value systems of anthropologists and public health professionals are at odds. How well both sides can communicate with each other and create a coherent programme is an indicator of a successful effort. Ideally, local communities and planners, using their different perceptions and knowledge, should negotiate how best to implement different programmes (Heggenhougen, Hackenthal and Vivek, 2003 chapter 8).

The Malaria Knowledge Programme at the Liverpool School of Tropical Medicine worked in the Volta Region of Ghana with district level health workers and trained them in participatory research methods to explore gender related issues on access to malaria services. The interaction and communication that took place between health workers and community members provided opportunities for dialogue and new relationships. Health workers said they learnt new skills to respect and listen to their patients, making headway in overcoming an often-heard criticism that health workers' poor attitudes contribute to the barriers that exist. In one village a mutual health organisation was set up to help women overcome financial difficulties.

It is critical for the local community to participate in setting the research agenda. In a bed net project in N'Djamèna, Chad, a Research Action Capacity Building (RAC) approach ensured that the people intended to benefit from the results controlled the research, planning, execution and the on-going evaluation, as well as the redefinition of activities. Here, social change was the ultimate goal. Partnership and the development and sharing of ideas, concepts and activities between local people, institutions and an NGO saw a high number of bed nets and re-treatments sold, and improved skills and

capacity in communication and negotiation (Felber, Othiquè, Yemadji and Wyss, 2001).

Communication challenges in malaria control

The principles of development communication have great potential to be applied to strategic malaria control. Development communication is a specialist field that has emerged broadly over the last two decades. "It is characterised by an interdisciplinary approach and is a fusion of contemporary social, anthropological, developmental, communication and marketing theory and practice" (Shuffell, 2003). Development communication puts knowledge and choice at the centre of the agenda and is characterised by people's rights to information and to a voice, freedom of all communication channels, participation, ownership of knowledge, accountability of governments and societies and people's improved ability to put informed choices into practice (Shuffell, 2003).

Communication needs to be included in the process of malaria control right from the start of activities, not as an afterthought or add-on at the end. This means thinking strategically about communication from the planning stages through to implementation and evaluation.

Silvio Waisboard (2003) provides five key ideas on development communication that can inform the inclusion of communication in malaria control activities:

- Focus on individual and contextual factors in behaviour change.
- Integrate top-down and bottom-up approaches.
- Have a toolkit approach.
- Combine media and interpersonal communication.
- Community empowerment should be the goal.

Gramiccia made four observations about the failure of health education in malaria control in 1981, and these are still applicable today. He argued that areas endemic with malaria are financially poor, with scarce medical facilities that are difficult to access. Malaria is just one element in part of a socioeconomic complex and local people find it difficult to single it out for particular concern. It is a complex disease to treat and health education in malaria control is not well adapted to local conditions (Gramiccia, 1981).

This context raises challenges for communication efforts in malaria control. Misperceptions of malaria, of which there are many across the world, can inhibit prevention and treatment actions, especially when there is little or no association of malaria to mosquito bites (Heggenhougen, Hackenthal and Vivek, 2003 chapter 3).

However, simply providing correct information is not the solution. It is now widely accepted that increasing people's knowledge does not necessarily result in changes in perception or behaviour and so any communication around malaria needs to engage sensitively with the entirety of local culture and beliefs (Espino, 1997).

The quality of health care and health care providers is also critical. If health care workers lack communication skills, lack motivation due to poor working conditions and

have negative attitudes towards their patients, malaria services will be ineffective (Haaland, 2005).

More than a message

"A communication strategy is an essential component of all malaria programmes from implementing changes in drugs policies to introducing home based management of treatment and establishing the wider use of ITNs" (Radio for Development, 2003).

Traditional information, education and communication (IEC) activities are often used as part of the solution. There is, however, frequent misuse of IEC; it is the way people use tools to engage with the community that matters. Being flexible and taking time to test the appropriateness of methods in a local context is more likely to prove successful.

The Bagamoyo Bednet Project in Tanzania found that posters and meetings had a limited impact on the predominantly Muslim population. A different approach was needed and when the sheik in each village was recruited to teach during Friday religious services about the merits of regular bed net impregnation, regular impregnation levels rose from a bare minimum to 53% and in some areas reached 98% (Mfaume, Makemba and Premji, 1997).

Involving local people in the process is therefore essential. Traditional healers who are consulted for treating convulsions and fever in children have been incorporated into local project activities. In Bagamoyo District in Tanzania, it was found that some served as members of village mosquito committees (Winch, 1996). This study also demonstrated that choice of terminology is critical in developing effective health communication interventions that relate to local people (Winch, 1996). Local terms for malaria can be numerous, have sub-categories and be in a state of flux so that terms that make sense now will not make sense in a few years' time (Gordon, 2000). This presents a communication challenge for outsiders.

Paying attention to context and culture

A central lesson from communication in malaria control is that country, regional and cultural contexts vary and require different approaches. RBM asked Radio for Development to undertake a malaria communication assessment in five African countries as a first step in developing effective and inclusive national malaria communication strategies across Africa. They found limited understanding and knowledge of development communication, considerable confusion over communication technology and methodologies and an over-reliance on IEC approaches led by health professionals rather than by communities (Shuffell, 2003).

One problem with IEC approaches is that they are often badly applied in a top down manner (Haaland, 2005). In this case, messages were often delivered as fact or apportioned blame and associated good behaviour with good individuals, leading to alienation. There were also limited strategies to meet the needs of the poor and marginalised groups.

Good IEC activities use combined and appropriate local channels of communication (both interpersonal and media). The appropriateness of this was demonstrated as people wanted materials disseminated in local languages, and expressed a preference for the use of local communicators, such as traditional story-tellers or 'griots', as these are the most trusted and respected sources of information. People wanted messages and dialogues that relate to and are delivered by people who share their experiences (Shuffell, 2003).

Delivering culturally appropriate malaria control interventions is critical. "The best efforts at community-based IEC will be to no avail if the malaria tool is technically sound but culturally incompatible," says Jane Bean of Oxfam who reported on bed net trials in the Sudan in 2001.

UNICEF's work in Mozambique shows ongoing participatory communication techniques are more effective than a one-time non-participatory messaging approach (Raphael, 2003).

Preliminary research in 1999 showed few rural inhabitants understood mosquitoes cause malaria, and that the disease can be cured if treated and prevented (Centro de Investigaçao em Saúde de Manhiça, 1999).

UNICEF applied a Community Capacity Development (CCD) approach by using tools based on simple drawings, developed with community input and participation. Communities were taken through a "continuous, iterative process of assessment, analysis and action, followed by re-assessment, further analysis and development of new actions" (Raphael, 2003).

In 2000, the CCD approach was applied in the emergency situation in Gaza Province.

Nets were distributed free with instructions containing pictures and a re-treatment voucher.

Before distribution, a theatre group performed a play including messages about malaria and diarrhoea prevention.

From October to December 2000, more than 200,000 bed nets were distributed and 189,000 people took part in capacity strengthening activities that helped them to assess, analyse and take action.

Despite initial concerns, there was no evidence that nets were sold in the marketplace or misused. Ten months later, follow-up participatory activities stressed the need for net re-treatment.

Results were phenomenal: 100% of

those interviewed knew what malaria was and 91% understood it is transmitted by mosquitoes (compared to 30% in a baseline study). Also, 98% still had and were using their net and over 95% of those who received a net reported sleeping under it.

Children were identified as a high risk group by 85% to 89% of respondents, while 57% of people said pregnant women were particularly vulnerable (compared to 0% previously).

Results from a different area, Manhiça Province, where less participatory methods had been used, were less impressive with 80% of respondents still using their nets and keeping them in good condition. Only 15% of respondents in Manhiça agreed that it is possible to protect against malaria using a bed net, compared to 93% in Gaza.

Traditionally the Nuer pastoralists in South Sudan sleep inside and outside in small, opaque white cotton bed nets or *dumurias*. These are highly valued as they are warm, safe, prevent mosquitoes from biting, protect against wild animals, are mobile, easy to repair and provide privacy. But because the *dumurias* are untreated, mosquitoes can bite through the cloth and large numbers rest outside. Insecticide treated nets were introduced to the Nuer as an alternative, but these were not used effectively as people preferred the warmth and privacy offered by their *dumurias*.

It proved too expensive to treat the absorbent cotton nets with insecticide and so Oxfam GB, RBM and a Danish textile company Vestergaard-Frandsen worked to produce two new ITNs in line with Nuer preferences. Trials incorporated an intensive IEC campaign to maximise the community's involvement by using culturally appropriate tools and participatory methodologies. The community has responded

positively to the new ITNs and the Sudanese users call the insecticide *waal* meaning strong medicine (Bean, 2001).

Toolkits and guidelines

Toolkits and guidelines exist to help programmers explore methods of participatory communication. Malaria specific tools include *Participatory Malaria Prevention and Treatment (PMPT) Toolkit* (UNICEF Mozambique, no date); *A toolkit for developing malaria communication strategies* (Radio for Development, 2003); and *Partnerships for change & communication – guidelines for malaria control* (Mehra/WHO/Malaria Consortium, no date).

Healthlink Worldwide's *Quest* is an innovative approach to strategic health communication (Healthlink Worldwide, 2004) and WHO's *PHAST guide* (WHO, 2000) consists of lessons that could be applied to malaria control in a community setting.

Conclusion

Participatory communication in malaria control matters because without genuine community understanding and engagement with the problem of malaria, external efforts will fail. A prevailing preference for examining mosquito behaviour rather than human behaviour has meant approaches that engage people are sometimes neglected to the detriment of malaria control efforts.

A range of communication tools exist to encourage participation at community level, leading to improved understanding of the causes and consequences of malaria, and identification of potential solutions. These tools must be applied effectively and skilfully according to the local context.

Current malaria control tools for prevention can be effective, but are sometimes inappropriate in local contexts. So interaction with communities to identify interventions they will actually use is vital. Collective understanding of the problem and decision making about how to address it needs to become part of community life and be sustained (Mehra, no date).

Encouraging protection of the most vulnerable community members is a key part of this. Diagnosing and treating malaria quickly with the right drugs is vital, but constraints in doing so are many and hugely varied. Factors include availability and appropriateness of services, gender relationships in the home and community, and costs of drugs. Communication around treatment needs to acknowledge the complex social and cultural environment to address these broader influences.

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Key list

» www.asksource.info

Communication in malaria control

A list of key organisations, articles, newsletters, books and websites on communication and malaria control is available from Source International Information Support Centre. Exchange is a partner in Source.

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