Community health priorities: Lessons for malaria prevention from Balaka district, Malawi

Warren Parker¹, Thaddeus Pennas², Innocent Kommwa³

1. Independent Consultant, Cape Town, South Africa  
2. FHI360, Washington D.C., USA  
3. Health Communication for Life (HC4L), Lilongwe, Malawi

Abstract

Introduction
Communication to address priority health challenges typically draws on epidemiological research in conjunction with referencing global and country strategies. While community-level perspectives on health challenges typically align with national priorities, nuances and barriers that constrain health response may be less well known. To deepen understanding of the relation between situational aspects of health and ways of making meaning, community insights into health priorities were explored.

Methods
Action Media, an established participatory research methodology for informing health communication design and strategy, was undertaken with parents of children under 5 in Balaka District, Malawi.

Results
Participants identified malaria as a priority concern in their community. While it was reported that there was strong commitment to consistent use of long lasting insecticide treated nets, there was frustration that malaria incidence remained high. It was observed that risk of exposure to mosquito bites was increased as a result of chores and other activities that extended into the early evenings prior to retiring to bed under a bed net. Bed bug infestations were said to be a common and ongoing concern. Some community members alleviated discomfort by abandoning their beds and sleeping outside without adequate protection while others boiled their bed nets to remove bed bugs. Accessing distant health facilities when ill with malaria was difficult for adults and children. Participants identified the need for effective strategies to address these concerns including accessing mosquito repellent, eradicating bed bugs, treating malaria locally and collaborating in malaria control activities.

Conclusions
Meeting targets for malaria prevention requires consideration of contextual factors that undermine effective malaria prevention in affected communities. Such factors are not immediately apparent through epidemiological data. Regularly assessing contextual challenges in high malaria incidence areas provides opportunities to understand gaps, to refine intervention strategies and to inform communication programming.

Introduction
Exposure to ill health at a population level is determined by a range of circumstances including vectors of disease, geographic locale, living circumstances and capacity to address risk. Addressing risk includes consideration of the relation between knowledge, context and culture towards support for individual or collective action. Communication campaigns and activities to promote health employ diverse strategies. These include individual-focused approaches that draw on biomedical frameworks and rationalist assumptions about health behavior, approaches that emphasize social learning through role modeling and diffusion of technologies or concepts, and approaches that consider audience participation and action towards social mobilization. Success of communication interventions depends on sound understanding of health challenges of audiences in conjunction with assessing the reception environment with regard to behavioral and socio-cultural concerns.

There is evidence to suggest that health communication is strengthened by approaches that explore health challenges in conjunction with participatory engagement activities to address understanding of health at community level. Participatory approaches consider health vulnerabilities in context, and take into account the potential for audiences to move from being recipients of information to empowered actors capable of dialogue, reflection and action in relation to their own health. To support understanding of health priorities at community level, a formative participatory study was undertaken with parents of children under 5 in the Balaka district of Malawi.

Methods
Action Media is an established methodology for health communication that derives insight into audience perspectives, fosters reflection and problem-solving around health issues, and informs design of communication strategies and interventions. Action Media provides an alternative to top-down ‘targeted’ approaches that may not adequately consider the extent of health knowledge, the dimensions of the enabling context for health, or the specific health challenges and capabilities of intended audiences. Working with small groups’ representative of broader audience characteristics, Action Media findings have been applied to inform diverse national and regional health communication products, activities, strategies and campaigns around the world. Employing a multi-session engagement process, the approach goes beyond conventional qualitative techniques such as focus group discussions. Relevance of findings to culturally and contextually similar audiences emerges as a product of the deeper exploration of health challenges in relation to locale, cultural meanings attached to health, and strengthening of commitment to health promotive action through communication and other support.

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Supportive communication

Critical reflection emerging through the Action Media process prompted interest in obtaining communal benefits through collective action at community level, and thereby framed the development of ideas for communication to support malaria prevention and treatment. For example, songs and poems were developed by participants that included verses imploring community members to seek treatment for malaria, emphasizing the importance of following prescribed dosages for malaria treatment, and encouraging maintenance of hygienic households and community environment.

Proverbs in the local language (Chichewa) were put forward. For example, “Pali chabwino paliso choyipa” (meaning that good deeds together with the evil, which in the context of malaria, illustrates that although mosquito nets are a good remedy, they have limitations such as not preventing bed bugs). Instead “Mwa chomwe” meaning the arrogant one was cooked together with the leaves – highlighting that people should talk to and cooperate with each other, instead of blaming others. LLINs offer interesting action at community level, including holding meetings to tackle issues of mutual interest and not waiting for solutions to come from the outside: “We have realized that now there are opportunities for us to fix these problems ourselves” (Female participant, Session 3, Day 4).

Concepts for posters depicted change through images that showed before- and after- scenarios to motivate action. It was also agreed that visibly distributing LLINs would be highly beneficial, with LLINs distributed within private homes to indicate support personalization and ownership of health concerns, rather than the only displaying such media at health facilities and other public venues.

Discussion

Malaria is a leading cause of illness and death among pregnant women and children under the age of 5 in Malawi. Around three quarters of children under the age of five (20%) experienced fever in the two weeks prior to the 2015/16 Demographic and Health Survey data collection, with 67% accessing health services, and 52% having blood taken for testing. Around two thirds of Malawian households (63%) experienced fever in the two weeks prior to the 2015/16 Demographic and Health Survey data collection, with 67% accessing health services, and 52% having blood taken for testing. Around two thirds of Malawian households (63%) having an insecticide treated net (ITN). ITNs have been shown to reduce malaria-related deaths by the past ten years and has been stable in the recent period. While global declines in malaria have been attributed to standardized control measures in combination with systematic scale-up of interventions in most-affected countries, the epidemic of resurgence when levels of malaria incidence have rebounded, thereby raising questions about the sustainability of interventions. Factors identified as contributing to malaria prevention include to be included weakening of programmes through reduction of funding, down-scaling of indoor residual spraying activities, technical challenges such as insecticide resistance, and reduced efficacy of insecticide-treated bed nets, and declines in community cooperation. Engagement with community members through the Action Media process demonstrated that despite good knowledge of malaria (including adequate risk perception and strong commitment to preventing malaria), the perception of malaria to be uncontrollably high in the community. Concerns about continued exposure to mosquito bites were related to social factors, concurrent exposure to infestations of bed bugs and limited community participation in malaria control. These concerns, supported by evidence from a participatory process and other approaches, and community members were frustrated by the contradiction between their commitment to LLIN use and their experiences of regular bouts of malaria. They were also worried about the consequences of not protecting some of their children and themselves that led to severe hardships and undermined family and community wellbeing.

Topical mosquito repellants are widely recommended for tourists and others travelling to malaria endemic areas, they have not been included among prevention strategies for broader malaria control. The use of mosquito repellants has been explored in various small-scale studies, primarily in Asia and South America, but also in a few African countries, and it is recommended. People suggest minimal to no protection to mosquito control13,14, with constraints being largely related to inconsistent use of repellants. Participants in the present study were not aware of such repellants, and showed a strong inclination of the view that they would make use of insect repellents to prevent mosquito bites prior to going to bed if these were made available locally. Such intrinsic motivation could be strengthened through more extensive communication, increasing potential for malaria prevention in such Malawian contexts.

Perspectives on the interaction between bed bug infestations and malaria control were revealing. Perceptions that LLINs provided by government had been abandoned, and that bed bug infestation led some community members to sleep outside without protection from mosquitoes undermined malaria prevention efforts. The cost of livelihoods was difficult to control, and insecticide resistance constrains eradication efforts15. Some community members were said to be boiling their LLINs to kill bed bugs, and this practice has been causative of malaria, where the insects are both simple and doable.

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presented by community members themselves. Proverbs offer greater opportunity to deepen meaning in support of health communication by connecting health concerns to cultural constructs and values. Interest in imagery that conveyed changes in preventive practices through before and after scenarios also supported motivation for change. The suggestion for expanding the distribution of health posters from public spaces to include the possibility of display in households indicates an interest in validation and ownership of health promotion within and by families. This suggests that communication based on values such as family responsibility, communality and taking action to improve health would have better traction than singular emphasis on persuasive communication conceived on a top-down basis that focuses on discrete behaviors.

Conclusions
Participatory research with health vulnerable community members highlights the relevance of additional prevention measures that are not typically considered as in conventional malaria prevention programming. While mosquito repellents do not appear to be effective as a complementary measure for malaria control in other settings, community members in this setting in Malawi appear to be intrinsically motivated to use mosquito repellent during critical times. Provision of treatment locally through HSAs would reduce time and costs of treatment seeking as well as potentially impacting malaria incidence. While it is unclear whether bed bugs are a widespread concern in Malawi, what this study reveals is that bed bug infestations have potential to considerably undermine the efficacy of LLINs, and measures to address this concern should be made available. The finding also highlights that formative and operational research should be undertaken to support efforts to eradicate malaria. Inclusion of community members in malaria prevention efforts should be prioritized, given that motivation to respond is prompted by a strong awareness of the counterproductive impacts of malaria on family and community life. Supporting indigenous formats of communication, including local idioms and cultural expression, increases opportunities for ownership of health response by community members.

Abbreviations
Insecticide Treated Net (ITN); Indoor Residual Spraying (IRS); Health Surveillance Assistant (HSA); Long Lasting Insecticidal Net (LLIN).

Ethical considerations
As this was formative research to inform programme design, it falls within the definition of non-research and ethical review was therefore not mandatory. Nonetheless, the study was guided by a formal research protocol that included an ethics component that was consistent with international guidelines.

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Competing interests
The authors declare that they have no competing interests.

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