



Beneficiary receiving a long lasting insecticidal net at a distribution point in Niassa province, 2017

## Learning Brief

In focus: Malaria Prevention and Control

### *Nets bring good health*

A qualitative inquiry into mosquito net use and care practices in two Northern provinces of Mozambique

#### Key findings

- > To improve mosquito net usage, social and behaviour change communication programming should explore the psychosocial and physical benefits of using mosquito nets for users, for example their improved sleep quality, in addition to protection against malaria.
- > Messaging around net use and care should be strengthened to increase use and improve the level of recall for long lasting insecticidal net care.

This learning brief is part of a broader project documentation exercise; to read more and other lessons learnt, go to:

<http://www.malariaconsortium.org/projects/malaria-prevention-and-control-project>

## Introduction

There has been a decline in the burden of malaria over the last decade: in 2015, there was a decline of nine percent in confirmed and unconfirmed cases from 2009 and a 34 percent reduction in mortality (MISAU, 2017). Nevertheless, Mozambique remains one of the most affected countries in the world (WHO, World Malaria Report, 2012). Malaria is endemic throughout the country, and is the leading cause of health problems, accounting for 29 percent of all hospital deaths and 42 percent of deaths in children under five.

Between 2011 and 2017, the Malaria Prevention and Control Project - Expansion for Universal Access through Community Participation, funded by the Global Fund to Fight AIDS, Tuberculosis and Malaria, has supported the National Malaria Control Programme (NMCP) with community interventions in nine provinces of Mozambique. Implemented by a consortium of civil society organisations, the project aimed to improve knowledge and attitudes towards, and promote uptake of effective behaviours for, malaria prevention and control. It sought to do this through a series of interventions that included: capacity building of community based organisations and school teachers, behaviour and social change communication, and community mobilisation, as well as distribution of long lasting insecticidal nets (LLINs) to contribute towards the NMCP target of universal coverage.

The role of Malaria Consortium within this project was twofold: providing technical leadership in programming for community engagement and behaviour and social change communication and implementation in two Northern provinces among those most affected by malaria, namely Nampula and Niassa.

### Ownership and use of mosquito nets in Mozambique

Long lasting insecticidal nets are one of the most cost-effective methods for reducing malaria-related morbidity and mortality (Lengeler, 2000; Goodman et al 1999).

In recent years, the Government of Mozambique has made efforts to distribute millions of LLINs to

vulnerable populations through mass distribution campaigns in order to increase universal coverage for all those at risk of malaria.

A post-campaign rapid assessment conducted in 2015, in selected districts, showed a level of ownership and use of LLINs above 80 percent in the nine provinces covered by the Malaria Prevention and Control Project, compared to the levels observed in the Demographic and Health Survey 2011, where both indicators were below 60 percent. The provinces of Nampula and Niassa appear as the only ones where ownership (96.7 percent and 93.8 percent, respectively) and use (86.0 percent and 85.4 percent, respectively) of LLINs meets NMCP's targets of 90 percent for ownership and 80 percent for use (Arroz et al., 2015).

Despite that these results suggest that communication and social mobilisation activities may have created adequate demand for mosquito nets, the challenge of maintaining a high level of long-term usage of mosquito nets remains. It is known that the ownership and use of nets are likely to decrease in the first two years after mass distribution (Kilian et al., 2010). Scenarios of non-use or misuse of nets have been reported.

A key to making these interventions more effective and sustainable in the long run is to understand what drives the demand for and use of LLINs and of other malaria prevention methods (Chase et al., 2009).

### Objective

Malaria Consortium undertook a qualitative small-scale inquiry in the provinces of Nampula and Niassa to explore the experiences and drivers of mosquito net use, non-use or misuse, and local perceptions regarding recommended prevention and control of malaria practices.

### Methods

Eight communities were purposefully sampled in four districts of Nampula (Muecate and Mogincual districts) and Niassa (Chimbunila and Mandimba districts) provinces, in areas covered by the community mobilisation activities of the Malaria Prevention and Control Project and that had benefited from a mass LLIN distribution campaign in the last six months.





Newly received LLINs being aired at household level, before first use, Niassa province, 2017

Primary data was collected in October 2014 through eight focus group discussions (FGDs) with community members (women and men), 12 individual interviews with ‘positive deviants’ (four women and four men) and representatives of community-based organisations (four men). All interviews and focus groups were conducted in local languages, by trained research assistants, audio-recorded after obtaining informed consent, and transcribed in Portuguese. A thematic analysis of the data was conducted to provide a description of the target group experience with LLINs and drivers of mosquito net use and non-use.

## Results

Most respondents had a relatively recent experience of using LLINs. Most stated that they did not have nets before receiving them through mass distribution, however, they adopted the practice of sleeping under a mosquito net easily and immediately.

### *Sleeping under the net is good practice and “civilised”*

Respondents almost unanimously stated that all members of their family sleep under mosquito nets, although some respondents mentioned that the number of nets received was insufficient. According to respondents, sleeping under a net is a social norm of good practice in their communities. In a group of women respondents, it was reported that men’s attitudes towards mosquito nets have also changed from distrust to encouragement.

*“Before our husbands would reprimand us for spreading this information, or if they found us meeting someone to teach us about good practices in the use of mosquito nets, but nowadays, no, they even encourage us to use the mosquito net.”*

*(FGD with women, Nampula)*

### **Misuse of LLINs is marginal**

Some respondents acknowledge that “some people” have still maintained “old customs” – such as “stretching and sleeping over the net, using the net for fishing or in the fields, mooring nets in their backyard and on roofs, as well as reselling the nets” – but consider that these practices are declining. The drop in misuse was attributed to people’s increased awareness of malaria risk and their understanding of the benefits of using a mosquito net.

In all focus groups and interviews, respondents were observed to have negative perceptions towards those who used the new mosquito nets for other purposes. However, respondents appeared to be more considerate towards using “old” nets that are no longer suitable for sleeping under for other purposes.

Respondents mentioned that the lack of nets and lack of information were barriers to use, but did not identify other specific barriers, and reported no discomfort or side effects.

*“ There isn’t (anybody) who does not like to sleep under the mosquito net. ”*  
(FGD with men, Nampula)

### **The nets bring good health**

In all the discussion groups, the participants expressed appreciation for the mosquito nets, saying that it provided them with better health.

When questioned about their experiences, all women and men respondents, expressed a feeling of improved “well-being” and “tranquillity,” stating that use of the nets has resulted in improved personal and family health.

*“ We have been very happy with this, because before we did not enjoy life properly, but today we have many healthy children because life is good. ”*  
(FGD with women, Niassa)

Respondents felt a positive impact on their health status as a results of using the nets, reporting that they noticed a reduction in malaria cases in all age groups. The main perceived benefits of using nets were being protected from mosquito bites and malaria.

*“ We are living well here in the community and diseases are reducing, few talk of malaria. ”*  
(FGD with men, Niassa)

*“ With the use of the mosquito net we feel good, we feel the benefits of using it, because before the mosquitoes brought us pimples. Today you sleep without a mosquito net and you wake up full of pimples, so we felt the pain before, and today we feel the benefits. ”*  
(FGD with women, Nampula)

In addition, all focus groups and interviews reported other advantages of using the nets, such as increased comfort, barriers against other insects, and of feeling “peaceful” and having a “good sleep” (FGD with women, Niassa).

Among ‘positive deviants’ who are regular mosquito net users, they perceived the use of nets to have individual benefits, including a feeling of happiness and achievement: “I feel good, because when it comes out, I win” (Individual Interview with man, Nampula). The use of nets was considered to constitute “good behaviour” in the communities, along with hygiene practices.





“The way you prevent malaria disease is not very different from preventing cholera, it requires hygiene at home. Only by maintaining hygiene can we end malaria.”

(Individual Interview with a man, Niassa)

However, respondents were not able to clearly identify which measures should be used to prevent malaria and why. For example, while malaria is clearly associated with mosquitoes, there remain beliefs around contracting malaria through consumption of dirty water or with dirt in the backyard, or from “animals that can contaminate with malaria”.

#### **Perceptions around LLIN care**

There is a good general awareness among respondents on the importance of taking care of their nets, however, recalling these messages and recommendations were weak and inconsistent.

In all groups, respondents recalled various advice on caring for nets, for example sewing or tying knots to repair holes. However, participants reported uncertainty in best practices of washing and drying the nets, and were uncertain of whether the nets should be washed in the river or at home or dried either in the sun or shade.

Most respondents reported that they washed their LLINs before using it for the first time to avoid side effects and also as a standard measure of hygiene “to reduce dust if it exists inside the mosquito net”, just as “when somebody buys clothing” (FGD with males, Niassa).

Respondents could not correctly recall instructions about airing their nets before first use. Instead most were seen to infer that the insecticide could be harmful and a considerable number of respondents reported having washed the net with soap or detergent before first use. However, some respondents often confused LLINs, which were already treated, with previously distributed nets that needed to be treated before use. Among those who correctly stated that nets should be aired before first use, they could not accurately recall how long the nets should be aired for.

#### **Using the net is being “hygienic”**

For most respondents, adequate use of nets form part of a set of good hygiene practices that contribute to good health. Many consider uncleanliness to be associated with the risk of disease, while cleanliness is associated with health.

Personal hygiene and cleanliness in the home are highly valued. It was interesting to note that among the various recommended malaria prevention methods (in addition to the use of nets), people were most concerned with environmental sanitation. Waste disposal, clearing of stagnant water, clothing and proper use of latrines, and household hygiene are considered to be preventive measures.

“

*Here in the community we do not use before washing..., if this is not done the net causes itching due to the existing [insecticide] in it. After washing we [hang] the net on the beds to avoid being bitten with mosquitoes.*

”

*(FGD with men, Niassa)*

## Conclusion

The perceptions, attitudes and knowledge reported here were limited to the views of those respondents, which may limit the scope of the information received in this study. These responses are, however, still useful in understanding the general attitudes of respondents. That people did not report any negative aspects about LLIN usage and that they value mosquito nets is consistent with findings from previous studies in the country (Morgan et al., 2014).

While respondents expressed satisfaction and had positive experiences with their recently received mosquito nets, the challenge will be to maintain sustained and consistent use of nets, which is a common obstacle in public health initiatives (Kremer et al., 2007). The findings from this study offer insights into attitudes and behaviours that can be worked with to develop regular habits of mosquito net use.

To promote the consistent use of nets, other psycho-sociological and physical benefits beyond protection against malaria, such as having a good and comfortable night's sleep, adopting modern practices and being hygienic should be explored. This approach has proven successful in other African countries (Percival, 2015).

Regular positive mosquito net users, as well as local leaders, should be engaged to champion mosquito net use in their communities, reinforcing existing social expectations for compliance with good practices.

Families are seen to value their nets and try to maintain and repair mosquito nets, even beyond their effective lifespan, as previous studies in Mozambique have shown (Morgan et al., 2014). As this inquiry showed, more information on how to care and use new nets immediately after mass distributions is needed as malpractice can contribute to mosquito net damage. Interventions that use community volunteers to promote use and help families hang their nets have proved to be effective, including in Mozambique (Macedo de Oliveira et al., 2010), and should be considered to complement campaigns (Eisele TP, 2011).

Additional research is needed to better quantify the degree of misuse of mosquito nets, and to qualify the determinants, especially in areas with reports of net misuse. This would allow for the identification of any problems and the development of strategies to address them.

While investment in social mobilisation efforts before, during and after distribution campaigns must continue and be strengthened, it is also essential to maintain strong community education and participation programmes that reinforces individual and collective motivations. It has been documented that, through this type of interventions, it is possible to maintain a high level of net use, even in a context of malaria reduction and lower risk perception (Wanatabe et al, 2014).

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A distribution team getting ready to deliver LLINs to beneficiaries and demonstrate the correct installation and use of mosquito net, Niassa province, 2017

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The Malaria Prevention and Control Project aims to support the efforts of the Mozambican government to reduce malaria throughout the country through scale-up of prevention and control efforts with community involvement.

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