

Knowledge, attitudes, practices and behaviours for malaria: “intense” versus “non-intense” communication interventions in an artemisinin resistance setting



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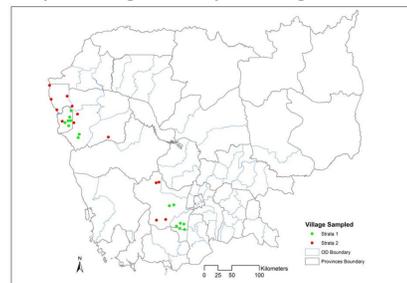
Introduction

In Cambodia, behaviour change communication (BCC) campaigns represent an integral component of previous and ongoing malaria efforts to fight artemisinin resistant parasites and move towards malaria elimination. These include broadcasting malaria prevention, treatment and diagnosis messages via TV, radio and mobile broadcasting units, the distribution of information education and communication materials, and the introduction of mobile malaria workers in at-risk villages. In order to look at the potential added effect of “intense” BCC interventions in three western provinces, an assessment was conducted in December 2012, two years after the start of BCC implementation. “Non intense” BCC interventions (e.g. radio or TV) were compared to “intense” BCC through village malaria workers (VMWs), village health volunteers, mobile broadcasting units and listener viewer clubs.

The aim of this assessment was to measure the effective implementation of the BCC interventions two years after initial

implementation of activities and compare knowledge, attitudes and practice of the population at-risk of malaria, between villages receiving intense BCC interventions compared to villages receiving non intense BCC interventions. The hypothesis was that people living in villages receiving intense BCC interventions had higher knowledge level and safer attitudes and practice with regards to malaria compared to people living in villages only receiving non intense BCC messages through TV or radio.

Map showing the sampled villages:



Methods

This was a cross sectional household survey using a stratified multi-stage cluster sampling approach. The strata were defined according to “intense” or “non-intense” BCC interventions provided in the cluster. Each stratum was considered a survey domain, for which 15 clusters were sampled using probability proportionate to size method. Household sampling was conducted using simple random sampling. All households were eligible for selection. A total of 774 households were interviewed in 30 villages. A standard and pre-tested questionnaire was developed in English and translated into the Khmer language. Interviewers were carefully selected so that they were culturally and socially acceptable. A one-week workshop including pilot-interviews was held prior to the field work. The target of the interview was female head of household. Each team consisted of four people together with local workers (the village health worker and local authority) to provide guidance in finding the families to be interviewed. All

information collected was double entered using an Access database. Both datasets were compared and any discrepant record was verified from the original questionnaires. Once this first stage of cleaning was finished, the data set was transferred to Stata version 10.1 (StataCorp LP, College Station, TX, USA) for further consistency checks and preparation for analysis. Final analysis consisted of basic frequencies and simple proportions. McNemar test for significance was calculated, comparing the outcome indicators between sampling strata. All analysis accounted for sampling weights and any potential clustering effect using the “svyset” command in Stata. This assessment received ethical approval from the Cambodian National Ethics Committee for Health Research (NEHCR) in October 2012. Prior to the interview, the interviewer was required to read carefully the information sheet and consent form. There was no conflict of interest.

Results

Figure 1: Knowledge of causes for malaria

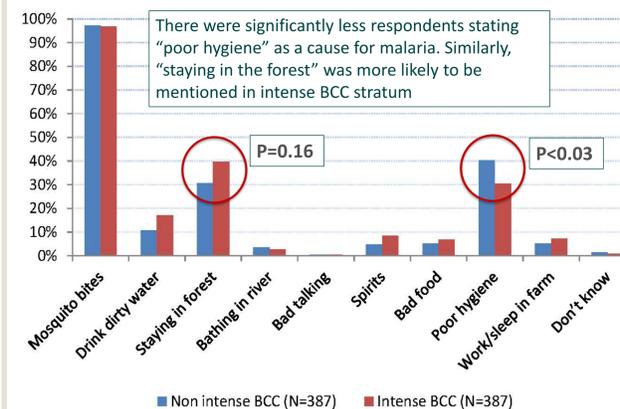


Figure 1:

Knowledge of causes for malaria was high across strata; overall, 97.2% mentioned “mosquito bites” meaning that only 23 out of 774 respondents did not know how malaria is transmitted. On the other hand, the second most mentioned cause was “poor hygiene” with 39.6%, and only 31.4% mentioning “staying in the forest”, despite this being a risk factor of importance in the studied area.

Figure 2:

Among all 220 sampled households, 26.5% reported having any member with a fever episode within the previous month and among these, 93.8% sought advice or treatment outside the house. Promptness of seeking treatment was significantly higher among intense BCC villages, where 77.1% households accessed health care within 24 hours of onset of symptoms as opposed to only 59.4% among non-intense BCC villages.

Figure 2: Promptness in health care seeking among reported fever cases within the past month

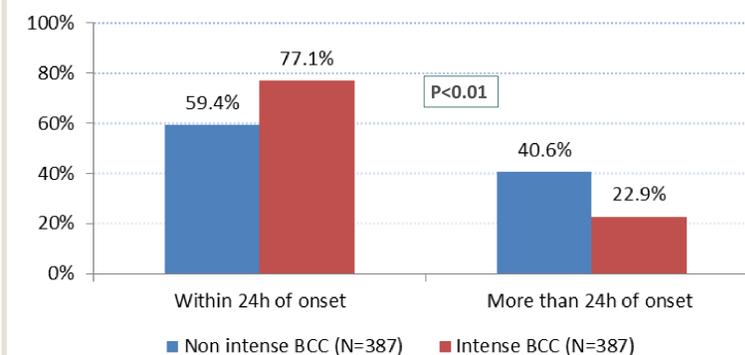


Figure 3:

Overall, 37.1% of household respondents ever discussed about malaria with anybody. However, this proportion was significantly higher among intense BCC villages, with 51.7% versus 35.8% (p=0.02). We also found that respondents among intense BCC villages were more likely to discuss malaria with health staff or community health workers compared with respondents in non intense BCC villages, where people were more prone to discuss malaria among themselves, with close relatives or neighbours.

Figure 4:

In general, 31.0% of all respondents remembered both prevention messages from any source of information and this proportion was higher among intense BCC villages with 35.4% versus 30.7%. With respect to treatment messages, the overall proportion of households remembering both key messages was much lower, with only 6.9% but again, respondents in intense BCC villages were significantly more likely to remember both messages compared to non intense BCC villages (p=0.04).

Figure 3: Discussion about malaria within the community

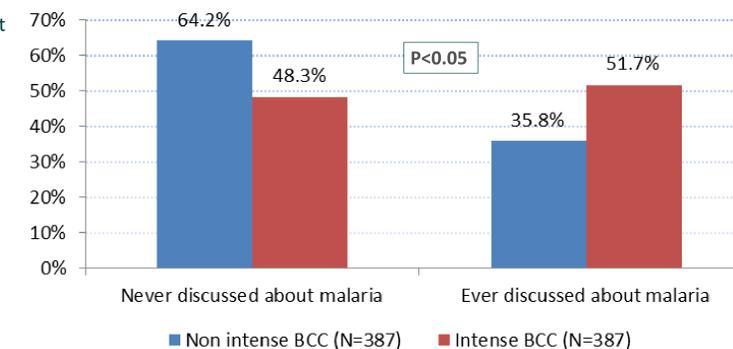
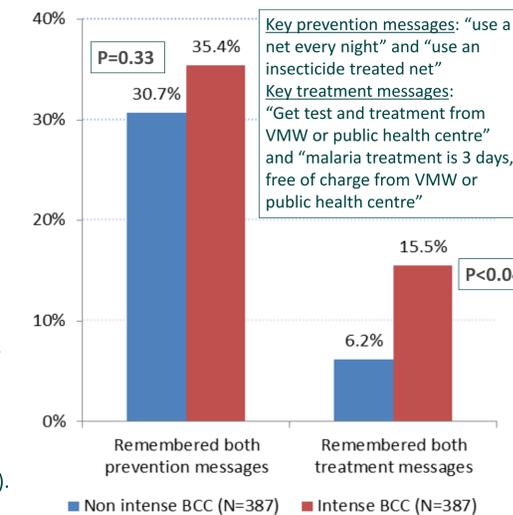


Figure 4: Coverage of key BCC messages



Discussion and conclusions

These results revealed several positive outcomes. Intense BCC resulted in higher level of knowledge of malaria such as the reduction of misconceptions and in an increase in awareness of the risks of malaria transmission. Intense BCC also led to several positive changes in peoples’ attitudes, such as promptness of health care seeking in case of fever or discussion within the community about malaria. This strongly suggests that intense BCC increased general awareness

about malaria and that, in turn, promoted interpersonal communication. Lastly, intense BCC resulted in a higher proportion of respondents remembering key BCC messages, both for malaria prevention and treatment.

This study shows evidence of improved levels in behaviour endpoints and not just on knowledge endpoints as usually reported in BCC studies. In addition, recommendations and lessons learned from

this assessment might be very valuable to the national malaria programme with respect to the planning and implementation of future effective BCC interventions, particularly since a number of behavioural factors are thought to contribute to the emergence and spread of drug resistance in this region.

Acknowledgements

This study was funded by the Global Fund to fight Aids, Tuberculosis and Malaria. The authors thank all organisations and individuals that participated in this project for field support, discussion, comments and participation. A special thanks to Malaria Consortium’s sub recipients (The Association of Medical Doctors of Asia, Cambodia (AMDA), BBC Media Action, Women’s Media Centre of Cambodia and FHI360) for offering constant support during the planning of the assessment.

