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

Sara E. Canavati de la Torre1, Celine Zegers de Beyl2, Chandary Rang3, Po Ly3, Thavrin Boukheng3, Maxine Whittaker4, Arantxa Roca-Feltrer1, David Sintasath5
1Malaria Consortium, Cambodia, 2 Malaria Consortium, United Kingdom, 3 National Centre for Parasitology, Entomology and Malaria Control, Phnom Penh, Cambodia
4Australian Centre for International and Tropical Health, University of Queensland, Australia, 5Malaria Consortium, Thailand

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 diagnostic 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 mobile workers (VMW), village health workers (VHW), villager clubs and local volunteers. The aim of this assessment was to measure the effective implementation of the BCC interventions two years after their implementation 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 to the cluster. Each stratum was considered a survey domain, for which 15 clusters were sampled using probability proportional 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.

The 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 questionnaire. 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 (NECHR) 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

The 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.

Discussion and conclusions

This study shows evidence of improved levels in behaviour endpoints and not just on knowledge endpoints as usually reported in such assessments. This 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.

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