



Trapeang Kreal, Cambodia-Lao border point

PROJECT BRIEF

Identification algorithm for asymptomatic malaria in migrants

The purpose of this study is to provide real insights into how cross-border surveillance can be adapted and better targeted to the difficult to reach populations and, accordingly, whether it should be continued and scaled up further

Project Outline

The movement of populations between malaria- endemic areas is believed to be a major contributor to the spread of artemisinin resistance along the Cambodia -Thai border. Cross-country flows also represent a challenge for malaria elimination as reintroduction of the disease would jeopardise all efforts. Populations crossing the border tend to be poorly connected to the health system, their high mobility makes them difficult to track and they are at higher risk of harbouring parasites due to the type of activities that they normally perform (e.g. forest and plantation workers).

Border populations remain a key area of focus for the malaria programme and recent cross-border activities have been initiated in Pailin province as it is a proven epicenter of drug resistance. These activities include the training of mobile malaria workers (MMWs), health staff and border officers. However, there are 11 unofficial cross-border points in Pailin where no surveillance is currently taking place. Economic migrants mainly use the unofficial cross-border points as easy-

access to look for work opportunities in Thai plantations and farms usually located in the forest. Moreover, no malaria specific activities are currently being implemented in other cross-border points of Cambodia (such as in Stung Treng or Rattanakiri) where malaria transmission is known to be higher than in Pailin.

In Cambodia, the 2009 malaria containment survey found the prevalence of malaria amongst mobile populations to be substantially higher than the general population. Within these mobile populations, forest-goers had the highest malaria prevalence rates (11.4 percent with PCR). Furthermore, the Cambodia Malaria Survey 2010 (CMS2010) indicated that the majority of the malaria cases were adult males over 15 years of age (60 percent). It is interesting to note that half of the malaria cases were farmers and reported to have slept in the forest in the previous 6 months. It was also found that forest-goers have a three-fold increased risk of malaria compared to those who do not go to the forest.

Country

Cambodia (Pailin, Stung Treng and Rattanakiri provinces)

Donor

Department for International Development / UKaid

Length of project and Start/end dates

June 2013 - April 2014

Main implementing partner

National Centre for Parasitology Entomology and Malaria Control, Ministry of Health Cambodia (CNM)

Collaborators

Provincial Health Department and Health Centres

Institut Pasteur du Cambodge

Chief of Police Border Check Points

In 2011, Cambodian national malaria programme (CNM) reported that about 17 percent of all cases in the Cambodia-Thai border area in Pailin were drug-resistant. In an attempt to address cross border imported and exported malaria cases, the fever screening programme was established by FHI360 at the official check points in Pailin province where MMWs currently provide active screening for fever for those crossing the border.

Of the approximately 11,000 border crossers that have been screened since the start of the year, only nine febrile patients have been detected, of which three were malaria positive.

Currently, screening at the Pailin cross-border point is based on fever, yet realistically, someone who is already sick is not likely to make the long, hot journey. This suggests that the current screening method based on finger-prick upon fever is not effective in identifying symptomatic cases and certainly in not detecting asymptomatic parasitemia cases. In the context of malaria elimination, a much more robust approach is needed to minimise the influx of malaria

and especially drug-resistant forms of the parasite on all cross-border areas of the country. This is particularly important now that drug resistance has also been confirmed in Vietnam.

We therefore propose to refine the current screening tool to develop an algorithm with higher sensitivity which will be able to predict which individuals may be at higher risk of harbouring malaria parasites and therefore should be tested. Once this tool is shown to work and replicated in other border settings, it will provide a critical new tool for malaria elimination programmes that will require tailoring to specific cross-border areas according to associated risk factors.

After completion of the implementation phase, data will be analysed and findings presented, along with a sustainable strategy for scaling up cross-border activities in the country, at a specially convened meeting in March 2014. Lessons learned from this project will form the basis for developing full strategies and scale-up projects to be submitted to other potential donors. In addition, a peer reviewed manuscript

will be submitted for publication that will summarise the findings and a series of dissemination activities targeting local, national and international communities will be conducted in March 2014. The findings on the evaluation of this cross-border project will be reported and will be used to evaluate the suitability of this surveillance response system for full implementation by CNM.

Project Aims

The impact from this study is to strengthen malaria control and elimination in the Greater Mekong Sub-region, and particularly to:

- » strengthen surveillance systems in the border points
- » eliminate any drug resistant parasite
- » contribute to Malaria Consortium's strategic objectives to develop innovative strategies and solutions, with a focus on malaria elimination through monitoring and evaluation, surveillance and dissemination of new learning.



Project operation areas

- Phsar Prom (Cambodia-Thai border)
- Trapaing Kreal (Cambodia-Lao border)
- O'yadao (Cambodia-Vietnam border)

Malaria Consortium

Development House 56-64 Leonard Street, London EC2A 4LT, United Kingdom
info@malariaconsortium.org / www.malariaconsortium.org
 UK Registered Charity No: 1099776