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PROJECT BRIEF

Trans-border malaria: Mapping high-risk populations and targeting hotspots with novel intervention packages

The project contributes to the control and elimination of *P. falciparum* malaria and artemisinin resistance in border regions of Cambodia and Thailand by identifying and addressing channels of parasite transmission and working to eliminate hotspots as well as to encourage the adoption of preventive behaviours within affected communities.

Project outline

Malaria control across the Greater Mekong Subregion (GMS) has reached a critical point. Resistance to artemisinin – one of the key components used in the most effective antimalarial treatment – has been confirmed in several regions, with recent evidence showing that these resistant mutations evolved independently as opposed to spreading from a single epicentre on the Thai-Cambodia border as previously thought in recent studies. This means that a change in focus is needed, from containment of artemisinin resistance to intensification of efforts to eliminate *Plasmodium falciparum* altogether in these high-risk regions and among susceptible population groups.

There are hurdles that must be overcome in order to eliminate *P. falciparum*. Border communities often live remotely and thus have poor access to health facilities and malaria control services. They can also be missed by conventional surveillance methods. These regions also consist of mobile and migrant populations (MMPs) moving within and between countries. Border populations and MMPs are at high risk of malaria infection due to their itinerant lifestyles as well as the difficulty involved in reaching them for diagnostic, treatment and

Country

Cambodia
Thailand

Donor

Global Fund RAI-ICC

Length of project

November 2015 to December 2017

Partners

Thailand:
Raks Thai Foundation

Bureau of Vector Borne Diseases

Cambodia:
Population Services Khmer

National Center for Parasitology,
Entomology and Malaria Control



Border crossing points in Cambodia where the project will operate

preventive interventions. Their occupations also bring them into close proximity of the forest, increasing their risk. Due to these difficulties in access, populations along border regions tend to use private providers (PPs) as opposed to public health facilities. Cases diagnosed at PPs often go unreported – and when they are reported, there can often be delays that lead to problems in detecting outbreaks.

The RAI ICC2 project addresses these issues and targets border areas of Cambodia with Laos and Vietnam, and of Thailand with Laos and Cambodia. It works to:

1. map hotspots and channels of infection and identify sub-populations with the highest risk of infection as well as under-use of current malaria control services;
2. target identified hotspots with tailored ‘packages’ of interventions to diagnose and treat both clinical cases and asymptomatic carriers, and increase preventive behaviours through use of behaviour change communication (BCC) as well as information, education and communication; and
3. improve cross-border data sharing and collaboration.

Interventions will include active case detection, directly observed treatment, and intensified case-finding at border points and in hotspots. The project will also pilot novel alert systems both at community and PP levels and will ensure delivery of BCC. Activities will build on current in-country components of the Regional Artemisinin Initiative (RAI) and other programmes that are ongoing in these regions by directing resources to those most in need. Intervention packages will be tailored to suit each region according to local resources and capacity in order to ensure sustainability and cost-effectiveness.

Malaria Consortium will work with partners Population Services Khmer and Raks Thai Foundation and will work closely with both national malaria control programmes in Thailand and Cambodia.

Project objectives

- » Active surveillance and mapping: To identify and map hotspots of transmission and channels of parasite dispersion along border regions and to identify high-risk sub-populations.
- » Response package implementation: To implement targeted ‘packages’ of interventions to help eliminate identified hotspots and increase practice of malaria preventive behaviours by high-risk sub-populations.

This project supports efforts to deliver:

- ✓ *Malaria control*
- ✓ *Public health communications*
- ✓ *Operational research*
- ✓ *Monitoring, evaluation and surveillance*
- ✓ *Resistance management*



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