Reducing Malaria among Mobile and Migrant Populations in Southeast Asia

Mobile and migrant workers are a key population in efforts to eliminate malaria in Southeast Asia’s Greater Mekong Sub-region. Engaging in construction and agricultural production in remote areas where malaria is common, these workers often lack 1) experience with malaria infection, 2) adequate access to malaria services, and 3) information on preventive measures and proper health-seeking behavior. When they return to their home communities where malaria is less common, they can bring malaria with them, endangering not only their families but also their communities. Adding urgency to strengthening malaria control among these populations is the emergence of artemisinin-resistant malaria, which has been documented in these remote areas and could undermine malaria control efforts in the region and even worldwide.

In response, the USAID | PMI Control and Prevention of Malaria Project (CAP-Malaria) has developed innovative approaches to reach mobile and migrant populations in areas where malaria persists. The project aims to contain the spread of artemisin-resistant Plasmodium falciparum malaria in the Sub-region, particularly Thailand, Cambodia and Myanmar.

**CAP-Malaria’s Approach**

Implementation is based on a multi-pronged approach that provides malaria information and services at multiple points that migrants typically visit or pass through in the region and returning home. First, as they travel, they receive malaria information from their taxi or bus driver and/or at border checkpoints. Depending on their place of employment, they can speak with a mobile malaria worker (MMW), get testing and treatment from a mobile clinic, visit a border malaria post or company clinic, or call a malaria hotline to talk to a provider (in their own language). They can also borrow a
long-lasting insecticide-treated bednet (LLIN) from their employer through a LLIN lending scheme. When returning home, they are screened for malaria and receive information on malaria symptoms, diagnosis and treatment.

**Reaching Migrants During Travel**

In Cambodia, mobile and migrant populations generally travel to high-risk areas by bus or taxi. CAP-Malaria has trained bus drivers from seven bus companies and 137 taxi drivers on high-traffic routes to give passengers malaria information. Drivers learn about malaria prevention, symptoms, where to get a diagnosis, and the importance of correct treatment. They also receive promotional materials such as electronic media (CDs, DVDs, or VCDs), stickers, sunblock, seat covers, and brochures. These promote key malaria prevention and treatment messages. The electronic media have popular songs and/or comedy films interspersed with malaria messages. Drivers meet quarterly to talk about their experiences and provide feedback to CAP-Malaria staff on how to strengthen outreach and overcome challenges. Every month, over 20,000 passengers—a quarter of them migrant workers traveling from one malaria endemic area to another—use taxis and buses to reach their worksites. Along the way, drivers deliver malaria control messages.

Transportation terminals or border crossings represent another point of contact during travel. Not only do these hotspots have a regular flow of mobile/migrant travelers, but those travelers have spare time while waiting for transport or crossing clearance. For example, in Myanmar’s Kawthaung Township, thousands of migrants pass through the Myoma Jetty and Bus Terminal each month, where CAP-Malaria has established two malaria-screening areas. At these screening areas, migrants are able to have their temperature checked, are tested with a rapid diagnostic test (RDT) for malaria, and receive treatment if necessary.

As migrants originate from a variety geographic areas, malaria educational materials need to accommodate people with different languages and cultures. CAP-Malaria works with local partners to develop tools for different populations and materials to promote key messages (see box) and strengthen BCC activities for communities along the border and migrant populations. For example, materials distributed near the Thai-Cambodian border have text in both local languages and provide information on the free services that non-Thais can receive in Thailand.

### Key Malaria Messages

- Sleeping under an ITN/LLIN prevents malaria.
- Seek malaria diagnosis and treatment within 24 hours of the onset of symptoms.
- Take the complete dose of antimalarials to cure and prevent drug-resistant malaria.
- To avoid counterfeit/sub-standard drugs, be treated by a public health provider or mobile malaria worker.

A taxi driver in Battambang, Cambodia, returns to work after affixing a malaria sticker to his car. Photo by Lina Kharn.

**Continuous Service Delivery by Migrant Malaria Workers**

A key source of malaria services for mobile/migrant populations is mobile malaria workers (MMWs). MMWs are recruited from among long-term migrants who are well connected with the migrant network and are familiar with local health services. They provide malaria education, diagnose malaria with RDTs, and treat simple cases. CAP-Malaria trains these volunteers to provide malaria education; help migrants recognize malaria symptoms; diagnose malaria; treat simple malaria; and refer severe cases, pregnant women, and children under five to health centers. Volunteers also provide counseling on the importance of treatment adherence: poor adherence can result in poor health outcomes and artemisinin-resistant malaria.

To maintain motivation and ensure high-quality services, MMWs regularly convene for meetings at the local health center or with health providers from a CAP-Malaria mobile clinic. At such meetings MMWs submit work reports, discuss challenges and receive new supplies.

**Outreach by Mobile Clinics in Isolated and Remote Villages**

Some areas with mobile/migrant populations not only have high malaria levels but are also extremely remote, so health care is often inaccessible. To ensure the availability of high-quality malaria...
services in such areas, CAP-Malaria introduced mobile malaria clinics that visit these areas to screen for and treat malaria cases. The clinics also provide support to MMWs, replenishing supplies and answering questions.

Mobile clinics in Kawthaung in the Tanintharyi region and Kayin State, both in Myanmar, are staffed by a doctor, a microscopist, a health worker, and, when needed, an interpreter. Each mobile clinic serves approximately 30 zones or villages in its assigned area and visits every zone/village at least monthly. Bi-monthly visits may occur in cases of high malaria prevalence.

**Border Malaria Posts in High-traffic Areas**

High-traffic border areas can have border malaria posts (BMPs) to provide those crossing the border with information on malaria prevention, diagnosis with RDTs, and treatment of uncomplicated cases.

CAP-Malaria has established 15 malaria posts and three BMPs in Kraburi District in Ranong, Thailand. Between June and December 2012, the BMPs were supported by CAP-Malaria to provide services to 1,400 migrants. In 2013, CAP-Malaria transferred BMP management to the Thai Bureau of Vector Borne Diseases (under the new U.S. government-to-government strategy). CAP-Malaria continues to provide monitoring and supervision support.

**Reaching Migrants through Employers**

Migrant workers’ employers that are located in remote areas with high malaria rates are well placed to ensure that their workers have access to LLINs and malaria services. CAP-Malaria is working with both small-scale agricultural employers as well as larger companies to provide malaria education and LLINs, diagnosis, and treatment to employees.

One example is in Cambodia, where many landowners in high-risk areas participate in a LLIN-lending scheme for their workers who otherwise would lack access to a bednet. The scheme, designed by the previous USAID Malaria Control in Cambodia project also managed by URC, distributes LLINs to farm owners, who then lend the nets to their migrant workers during the season and retrieve them for re-use during the next season. An evaluation of the scheme found that it was well accepted by farm owners, workers, village malaria workers, and village chiefs. The scheme, implemented thus far in 376 villages, is being scaled up by the National Malaria Control Program to other areas.

CAP-Malaria is also working with large companies employing migrant workers in high-risk areas. For example, in Myanmar, CAP-Malaria works with Dawei Development Company Ltd. to distribute LLIN and provide malaria services to over 50,000 migrant workers from other areas in Myanmar and from Thailand.

**Twin-cities: Strengthening Local Policies on Migrant Health**

Key to sustainable changes in malaria service delivery to mobile/migrant populations is the endorsement and leadership of local malaria officials. CAP-Malaria’s strategy to build local capacity for cross-border collaboration is the formation of twin-city relationships between cities on either side of the Myanmar-Thai and Cambodia-Thai borders. Cross-border committees meet quarterly to coordinate plans and implement joint activities. CAP-Malaria is facilitating partnership-building activities that include supporting malaria staff from the two twinned cities to work closely to strengthen malaria services through joint training, recruitment of MMWs, and management of BMPs. CAP-Malaria worked with
malaria officials to establish an interpreter hotline to help malaria providers conduct case interviews and case investigations of patients not fluent in the local language. Malaria staff now share malaria data each month to help guide decision-making and resource allocation. Malaria staff are also collaborating to develop bilingual patient ID cards and informational materials that respond to the needs and concerns of mobile/migrant populations in their areas.

**The Way Forward**

Malaria continues to threaten people in the Mekong sub-region and elsewhere, and the threat is becoming more acute with the development of artemisinin-resistant strains. However, CAP-Malaria has developed innovative strategies that are proving effective in reaching mobile/migrant populations, key to containment and elimination of malaria in the region. Over the next two years, CAP-Malaria will scale-up and intensify these interventions to reduce malaria among mobile and migrant populations, adapting them to more appropriately meet the needs of the different populations in the three countries. CAP-Malaria will also continue to seek to develop other innovative models to reduce malaria transmission and infections.