

# Understanding malaria prevention and treatment strategies among migrants in Thailand's Cambodia and Myanmar border areas

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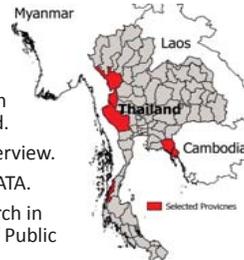
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## Background

- Understanding migrant malaria treatment strategies is important for malaria control and elimination, as well as containment of artemisinin resistant malaria which has been detected in Thailand's Cambodia and Myanmar border areas.
- In 2012, there were 32,648 treated malaria cases in Thailand and 60% of these cases were migrants.
- Migrants are a diverse and mobile population who cross the border a variety of reasons including work (both legal and illegal), healthcare, visiting people and fleeing conflict. Some migrants are long term or permanent, while others cross the border often, even daily.
- In these border areas migrants are at risk of contracting artemisinin resistant malaria and spreading it to other areas as they move.
- One strategy to address the resistance problem could be to improve the access of migrant populations to malaria prevention mechanisms and treatment.
- A questionnaire survey was conducted among migrants attending malaria clinics and border malaria posts in artemisinin resistance areas in September 2013.

## Methods

- The survey was conducted in 'Tier 1' provinces; those classified as having credible evidence of artemisinin resistance (7). In these provinces there were 463 malaria clinics and border posts.
- Multi-stage sampling was used to select provinces (5), then health facilities (8), then individual migrants (386) who were interviewed.
- Languages of migrants were used during consent process and interview.
- Data was collected using electronic tablets and analysed using STATA.
- Ethical Clearance obtained from the Ethical Committee for Research in Human Subjects, Department of Disease Control, Thai Ministry of Public Health.



### Areas of interview focus

Malaria knowledge	Knowledge of malaria signs, symptoms and prevention methods, sources of information on malaria
Prevention behaviour	Net ownership, net types and treatments, use of nets knowledge of ways of preventing mosquito bites
Treatment-seeking behaviour	Choice to seek treatment, type of provider, drug course completion and follow up attendance
Socio-economic data	Age, occupation, income, movement patterns

## Key findings

### Malaria knowledge

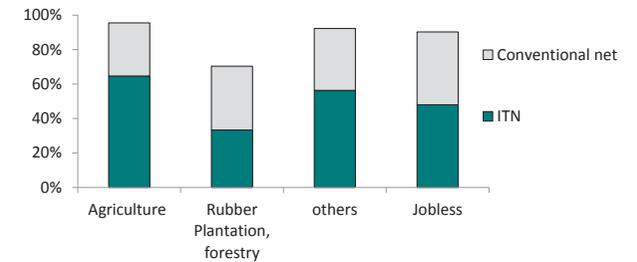
- 56.7% report of learning about malaria key messages in past three months.
- 43.8% of migrants were classified as having 'good' knowledge overall while the rest classified as 'needing improvement'.

Knowledge area	% Know
Know a source of testing/treatment	97%
Know common malaria symptoms (fever, headache chill)	89%
Know benefits of Insecticide Treated Nets	57%
Report malaria recurs due to antimalarial drug incompleteness	54%
Know warning signs of severe malaria	53%
Report sleeping under net prevents malaria	49%
Report using mosquito repellent helps prevent malaria	17%
Report wearing long/covered clothing helps prevent malaria	10%

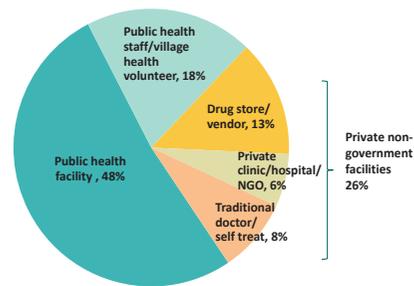
### Prevention behaviour

- 91% migrants own nets and 92% reported using a net the previous night.
- Net ownership and use in rubber plantation and forest workers (70% and 67% respectively) is lower than other professions.
- Rubber plantation workers are also the only group more likely to have a conventional net than an insecticide treated net, though this result was not statistically significant.

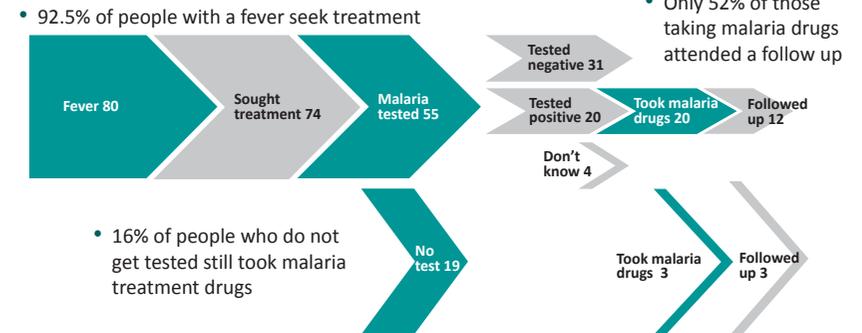
#### Net ownership: Occupations



### Where migrants seek treatment



### Treatment-seeking behaviour



## Recommendations

**Investigate barriers to testing and follow up:** Although 97% of participants can identify a source for malaria testing, only 69% got a malaria test the last time they had a fever. Once identified, positive cases all report receiving treatment, though only 52% of those taking treatment report attending a follow up. Testing and follow up are therefore strategic points which improve the treatment chain, leveraging the high rates of treatment of positive cases. A better understanding of these barriers and improvement of interventions accordingly will have a large impact on the overall treatment quality which migrants receive.

**Increased preventive options for rubber plantation/forest workers:** This group had the lowest net ownership, lowest insecticide treated net ownership, and the lowest net use the previous night. Few people showed knowledge on other preventive measures against malaria, such as using repellent or long clothing. While there should be a focus on ensuring net coverage and use at home, it should also be considered that much of the work in this sector takes place at night and this group of people will not be able to be under a net. Therefore, other existing preventive measures should be emphasised for this group and new preventive methods investigated for their effectiveness.