

Malaria Elimination In Eastern Myanmar

Malaria Elimination Task Force
Shoklo Malaria Research Unit

Background

- The Malaria Elimination Task Force (METF) is a partnership between the Shoklo Malaria Research Unit and community-based health organizations in Eastern Karen State (Eastern Myanmar), developed in 2014 with the objective to eliminate drug-resistant *Plasmodium falciparum* and then *Plasmodium vivax*.
- The METF program covers over 1,200 villages in Kayin State, Eastern Myanmar provides early diagnosis and treatment by trained malaria post workers.
- *P.falciparum* elimination efforts have largely been successful.
- *P.vivax* incidence remains high and this persistence is related to latent infections which require primaquine treatment to clear the infection.
- Primaquine is contra-indicated for individuals with G6PD deficiency.

Geographical context

The target area has experienced conflict for over 60 years, and program implementation is complex due to the remoteness of the region (days walk from the border). This context has meant that health infrastructure and road systems are lacking. Access to the most basic medical services requires several days walk for many living in this region.

Key strategy for P.vivax elimination

- Engaging with different levels of policymakers and stakeholders to discuss operational strategy for *P.vivax* malaria elimination.
- Increasing access to G6PD testing and radical primaquine treatment by training and providing G6PD test – G6PD biosensor and RDTs at malaria posts.
- Provision of counselling training to malaria post workers to understand the importance of anti-relapse primaquine treatment completion in *P.vivax* patient.
- Community awareness campaign for the malaria elimination and small group discussion (SGD) with the community members in the intervention villages.

Small group discussion was conducted in villages in Kayin State, where G6PD testing and radical treatment are deployed.

Community perspective

- While regional malaria efforts primarily target falciparum malaria, many community members do not differentiate different species of malaria.
- Many villagers have experienced repeated malaria attacks from vivax infections and willing to take the anti-relapse treatment from the village malaria health workers.
- Community acceptance is good as some villagers had episodes of vivax in the past.
- Follow up visit called by MPW is difficult for the residents living in farm sites/work sites which is a bit far off from the health post.

Malaria post worker perspective

- Some of the workers presented with repeated *P.vivax* infection and wanted to provide radical treatment for vivax.
- MPW are also willing to do the frequent patient follow up until the treatment is completed.

Limitations and challenges

- Rapid diagnostic test is qualitative and it is not able to diagnose intermediate G6PD deficient females. Therefore 14 days PQ cannot be given safely.
- Biosensor, the initial cost set up cost is high and there is a cost constraint.
- Adherence will remain difficult to ensure practically because of the prolong *P.vivax* radical treatment regimen

Conclusion

- G6PD deficiency testing is feasible and doable in remote settings by using quality training and by closely engaging with the local communities.

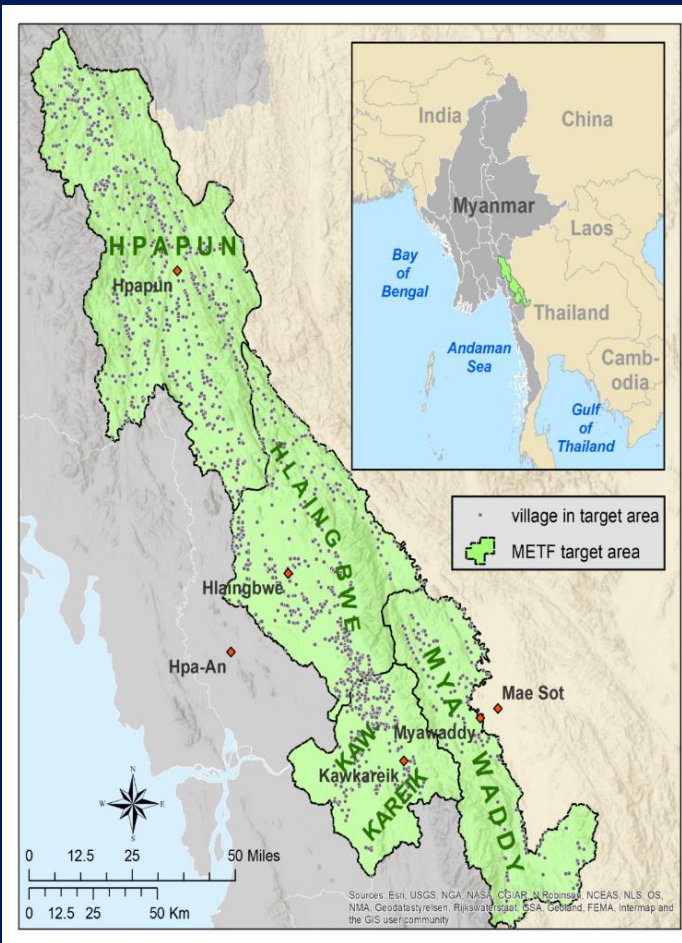


Figure 1: METF program targeted area in Eastern Myanmar, Kayin State



Figure 2: A village and a waterway to access in METF program targeted area in Eastern Myanmar



Figure 3: the Malaria Post (MP)
MPs are: 1) Staffed by trained and paid community member. 2) Stocked with rapid diagnostic tests and antimalarials.



Figure 4: Community consultation and engagement with the stakeholder and villagers for the P.vivax elimination strategy.

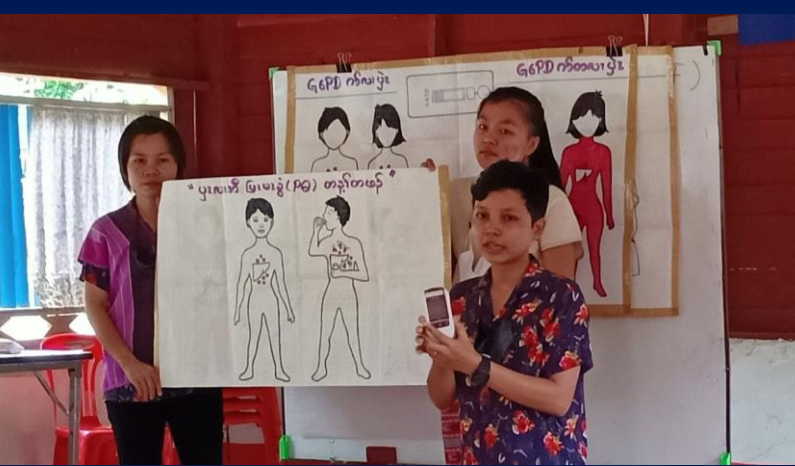


Figure 5: Training on the usage of G6PD point of care tests using the local dialect in Karen to the malaria health workers



Figure 6: Counselling materials developed by SMRU team together with the malaria post workers



Figure 7: Small group discussion about the relapse nature of vivax and how to prevent



Figure 8: Village health worker explaining about the G6PD test result written on the G6PD test result of the patient.