



## SURVEILLANCE OF MALARIA INFECTION IN ROYAL THAI ARMY AREAS OF OPERATION (AOS) ALONG THAI BORDERS

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### Progress Report

Military areas of operation (AOs) along Thai-Myanmar and Thai-Cambodian borders especially in Tak and Ubon Ratchatani, Sisaket provinces, respectively, are known as multidrug-resistant malaria endemic areas. The Royal Thai army troops deployed to those areas are at risk for malaria infection. Upon infection, they are evacuated from the AO causing force reduction. Malaria surveillance is crucial for effective malaria prophylaxis and decreases disease non-battle injury (DNBI). We have conducted a continuous surveillance program to obtain the epidemiological information of malaria in AO along Thai-Myanmar border (Tak province) and Thai-Cambodian border (Ubon Ratchathani and Sisaket provinces). In 1995, malaria infection among soldiers in AOs was highly prevalent. According to the application of protective interventions in this region, the malaria infection reduced after year 1995 and was not prevalent until nowadays. However, the prevalence of malaria infection in AO is increasing during Thai-Cambodian border conflict situation. Although protective interventions such as repellent, personnel bed net, screen net covering, pyrethrin coated uniform and elimination of mosquito and mosquito-breeding sites using pyrethrin smog have been implemented in response to data evaluation acquired from each year, the infection is still high in this region. During Fiscal Year 2010, monthly surveillance has indicated that malaria infection rate was 5.21% *P.falciparum*, 19.18% *P.vivax* and 0.96% mix-infection of *P.falciparum* and *P.vivax* in Thai-Cambodian border under Suranaree Command where the ratio of *P.falciparum* / *P.vivax* was 1:3.7. And Fiscal Year 2011, monthly surveillance has indicated that malaria infection rate was 1.55% *P.falciparum*, 8.13% *P.vivax* and 0.18% mix-infection of *P.falciparum* and *P.vivax* where the ratio of *P.falciparum* / *P.vivax* was 1:5.2. Nevertheless, prevalence of malaria infection is stably maintained in Thai-Myanmar border under Naresuan Command where there is no border conflict situation. During Fiscal Year 2010, monthly surveillance has indicated that malaria infection were 0.53% *P.falciparum* and 2.18% *P.vivax* where the ratio of *P.falciparum* / *P.vivax* was 1:4.3. And Fiscal Year 2011, monthly surveillance has indicated that malaria infection were 3.42% *P.falciparum*, 4.63% *P.vivax* and 0.45% mix-infection of *P.falciparum* and *P.vivax* where the ratio of *P.falciparum* / *P.vivax* was 1:1.4.