

## **Point-of-care testing for malaria outbreak management.**

**[Ratnawati](#), [Hatta M](#), [Smits HL](#).**

**Department of Parasitology, Hasanuddin University, Makassar, Indonesia.**

### **Abstract**

**A rapid antigen assay for malaria was performed on blood samples collected during a simultaneous outbreak of falciparum malaria and vivax malaria on a remote island in the Indonesian archipelago. During the outbreak, a total of 89 patients (4.3% of the population) were diagnosed with malaria within a week. Microscopic examination revealed 78 malaria slide-positive cases, of whom 49 (62.8%) were identified as *P. falciparum*, 7 (9.0%) as *P. vivax* and 22 (28.2%) as mixed *P. falciparum* and *P. vivax* infections. The rapid malaria assay showed excellent correlation with expert-confirmed routine microscopy for *P. falciparum* and *P. vivax* mono-infections and mixed infections with a parasite density >50 parasites/microl. Several slide-negative blood samples collected from febrile patients with clinical malaria tested positive in the rapid test. The estimated sensitivity calculated for the rapid test (91.0%) was slightly higher than that of microscopy (87.6%). The result indicates that rapid antigen detection for malaria could be a useful alternative to microscopy to reduce the workload during emergency outbreak situations.**