

The effects of rapid diagnostic tests for malaria in African healthcare settings

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Researchers from the Cochrane Infectious Diseases Group conducted a review of the effects of introducing rapid diagnostic tests (RDTs) for diagnosing malaria in primary healthcare settings in Africa where laboratory services are unavailable. The review included seven randomized controlled trials, enrolling 17,505 people with fever, and found that using RDTs reduced the prescription of antimalarial drugs by up to three-quarters, but didn't change the number of people still unwell a week later.

Most malaria cases occur in rural areas of Africa where [health workers](#) have to rely on clinical symptoms alone to diagnose malaria. This typically results in most people with fever being given [antimalarial drugs](#), even though many of them will have other causes of fever; many likely to resolve without treatment, but with a few requiring antibiotics.

RDTs are simple to use diagnostic kits which can detect the parasites that cause malaria from one drop of the patient's blood. They do not require laboratory facilities or extensive training, and can provide a simple positive or negative result within 20 minutes, making them suitable for use in [rural areas](#) of Africa. This allows health workers to check whether people with fever have malaria or not.

The review found that in areas where malaria was less common, and where health workers followed the test result correctly, using RDTs greatly reduced the prescription of anti-malarial drugs. In some studies antibiotic prescribing was increased in the RDT group, but in others it did not change. This may be because health workers are not given clear guidance on what to do when the test is negative, the authors of the review suggest.

Five studies followed up patients in both groups to see if there was any difference in the number that were well a week later, but the analysis did not

show conclusively whether using RDTs made any difference. The review authors say that introducing RDTs is unlikely to improve health outcomes for people with true malaria, but may help the health workers better treat people with fever caused by other diseases.

John Odaga, from Uganda Martyrs University, Kampala, the lead author, said: "The review shows that if RDTs are introduced with appropriate training and support they can reduce unnecessary use of antimalarial drugs. However if we want to improve [health outcomes](#), we need to also improve the treatment of the other causes of [fever](#)".

The Cochrane Infectious Diseases Group prepare and update systematic reviews in malaria, tuberculosis, tropical diseases and other infections, with a total of 117 reviews published. They are a global group with 18 editors, 569 authors and the LSTM host the editorial base.

More information: Odaga J, Sinclair D, Lokong JA, Donegan S, Hopkins H, Garner P. "Rapid diagnostic tests versus clinical diagnosis for managing people with fever in malaria endemic settings." *Cochrane Database of Systematic Reviews* 2014, Issue 4. Art. No.: CD008998. [DOI: 10.1002/14651858.CD008998.pub2](#).

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