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An RDT is carried out on a young child by a health facility worker
Photo: Tadej Znidarcic/Malaria Consortium

Learning Brief

Successful roll out of RDTs in Uganda

Rapid diagnostic tests (RDTs) for malaria have the potential to show a significant positive impact on malaria case management. However, the introduction of RDTs into a national health system requires more than commodity provision and distribution, but rather a holistic systems strengthening approach. This brief is based on Malaria Consortium's lessons learned over three years of implementation and research on scaling-up the use of RDTs at community and health facility level. It contains recommendations on critical issues which need to be addressed by all stakeholders to ensure the successful roll-out of RDTs in Uganda.

Despite the relatively high cost of RDTs, their use is a cost-effective measure in settings currently over-treating for malaria with artemisinin combination therapy (ACTs), provided that health workers treat patients in accordance with the results.

By expanding access to parasitological confirmation of malaria, RDTs potentially provide:

» Improved differential diagnosis of fever
» Improved case management of patients with fever
» Improved trust in effectiveness of anti-malarials
» Reduction in unnecessary use of anti-malarials
» More rational use of medicines
» Potential delay in the emergence of resistance to anti-malarials

In response to the World Health Organisation's recommendation for universal diagnosis and treatment of malaria based on adherence to the parasitological test results and through funding from the Global Fund to Fight AIDS, Tuberculosis and Malaria and USAID's President's Malaria Initiative, more than **15 million RDTs** are expected to be distributed by the Ministry of Health in Uganda over the next few months.

However, if Uganda is to successfully scale up the use of RDTs at health facility and community levels and sustain the benefits achieved for the health system, there are four areas that need specific attention.

Appropriate training of health workers and village health teams

» Because of the impact of RDTs on case management, all health workers involved in the management of patients need to be trained, not only laboratory technicians or highly qualified doctors.
» Cascade training (national trainers ® district trainers ® health workers ® village health teams) should involve all levels of the health system. The creation of a pool of trainers and supervisors - both clinical and laboratorial - will foster uptake of the new diagnostic tool and enable regular support supervision in the long term. In districts with less health service coverage or with insufficient highly qualified health workers, national trainers or competent trainers from neighbouring districts should be used to support the knowledge transfer.
» The selection of trainers is a crucial step in which both technical and teaching qualifications, as well as commitment, should be considered. While a laboratory technician can provide training on how to perform an RDT, it is essential for a clinical officer to be in charge of training on case management, patient education and record keeping.
» Using both a facilitator's manual and a user's manual, the training should be based on participatory methods and include practical sessions to enhance health workers' learning and confidence.
» Special emphasis should be put on the management of cases with negative RDT results. A small guide should be developed for health workers containing steps in management of such cases (including how to carry out further diagnosis and when to refer to higher levels within the health system). At community level, the importance of referral to the health facility should be stressed.
» Both at community and health facility level, it is crucial to develop health workers' interpersonal and communications skills. Packaged messages and strategies should be added to the user's manual to help them explain the RDT results and increase the confidence of patients.
» Infection control – safe use and disposal of blood samples – needs to be addressed during the training, especially at lower levels of the health system.

Follow-up and support supervision to improve quality of services

» Training alone cannot achieve uptake by health workers and village health teams (VHTs). Changing health workers' attitudes and improving their skills and confidence requires a long-term approach with consistent integrated support (covering all components of health service delivery) tailored over time.
» District trainers have to be trained in integrated supervision methods and mentoring.
» The focus of support supervision visits has to be tailored over time according to the needs of health workers and VHTs. Checklists need to be developed for each step of supervision. Supervisors should be adaptable to the specific needs of each health facility/worker.
» Immediate follow-up after training is required to make sure knowledge and skills acquired during training are put into practice. This follow-up visit and a second one after six weeks means health workers are assisted in setting up their workspaces and stores. It also gives supervisors an opportunity to observe the quality of the health worker or VHT in performing the RDT and provide support and guidance for case management. During quarterly support supervision, on-the-job guidance on case management practices, rational use of drugs, record keeping and stock management should be provided.

Health workers in Hoima are trained in the use of RDTs
Photo: Tadej Znidarcic/Malaria Consortium

"There is need for a constant supply of RDTs and support supervision to this facility in particular and the district in general so as to maintain the quality of services offered to our patients."

Jane Mwesige, registered comprehensive nurse, HC III in-charge

Strong monitoring mechanisms

» The improvement of record keeping (number of patients tested, test results, treatments prescribed, follow-ups) at all levels and better integration of all data at district and central level (HMIS) are necessary to monitor cases of malaria and other febrile illnesses and inform communicable disease control. E-health initiatives, such as mTrac, should be explored further.
» There is an urgent need to quantify supplies based on consumption to avoid stock-outs or over stocking. Accurate data on cases should inform procurement and distribution of both RDT kits and drugs to the health facilities and VHTs.
» An external quality assurance framework has been developed with the Ministry of Health to ensure RDT quality at all levels of the health system. Ensuring quality of the test kits promotes acceptability and trust in the results.

Sensitisation and social mobilisation to ensure uptake and adherence

» Achieving the expected benefits of RDT use requires full adherence to test results by health workers and beneficiaries.
» Political and religious leaders at all levels should be sensitised to ensure the environment is favourable to health workers' new practices. Local leaders, in particular, should be involved in the implementation process so that they can fully understand and communicate the potential benefits on the health of their communities.
» Behaviour change communication campaigns are necessary when moving from presumptive to diagnosis-based treatment so that community members can understand and accept the changing practices in case management. These activities need to be planned, budgeted and rolled-out from the onset of implementation.
» Sensitisation of and continuous dialogue with the private sector is also needed to make RDTs more widely available and ensure they have a profound impact at national level.

The roll-out of RDTs across the country will achieve the desired impact only through involvement of all stakeholders simultaneously addressing the following issues:

- **Appropriate training of health workers in case management and patient education**
- **Support supervision tailored over time to improve and sustain quality of the services**
- **Strong monitoring systems to improve disease surveillance, ensure the quality of the test kits and inform stock management**
- **Sensitisation and social mobilisation to ensure uptake by the communities**

Malaria Consortium is one of the world's leading non-profit organisations specialising in the comprehensive control of malaria and other communicable diseases – particularly those affecting children. Established in 2003, Malaria Consortium works in Africa and Southeast Asia with communities, government and non-government agencies, academic institutions, and local and international organisations, to ensure good evidence supports delivery of effective services for disease control.

Through two projects funded by Comic Relief and the Canadian International Development Agency, Malaria Consortium has pioneered the introduction of RDTs at community and health facility levels in nine districts of Mid-western Uganda. Between November 2009 and October 2011, Malaria Consortium trained more than 1,000 health workers and 6,700 VHTs on use and management of RDTs. In total, 126 health facilities and 3,350 villages are now using RDTs to diagnose malaria.

Using evidence from the field and its expertise in diagnosis and case management, Malaria Consortium has worked with the Ministry of Health (National Malaria Control Programme and Maternal and Child Health Division) to develop training manuals and guidelines for the national roll-out of RDTs. The lessons learned through the implementation of our projects have informed the recommendations listed in this brief.

"The way we test now is much better than before, when we used to just diagnose malaria if a child felt cold or hot to the touch. Now, we can diagnose correctly with RDTs and if it's not malaria, then we refer to the clinic for further tests so the child gets the correct treatment and we don't waste the drugs."

Tibagwa Solomon Spaya, village health team member

A village health team member shows a mother the RDT result for her baby
Photo: Tine Frank/Malaria Consortium

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