BRIEF OVERVIEW

Malaria is Uganda’s leading cause of morbidity and mortality. It accounts for 25 to 40% of outpatient visits to health facilities and is responsible for nearly half of inpatient pediatric deaths. The proportion of children under five treated with an antimalarial drug on the same or the next day after onset of fever is about 36%, although the proportion receiving an ACT is only about 14%. The proportion of women receiving two doses of intermittent preventive treatment in pregnancy (IPTp) is 32%. Ensuring the availability of the right quantity of the right type of malaria medication is difficult. This is in part due to the often missing or inaccurate information related to stock levels. In the past, District Malaria Focal Persons tracked the stock levels of malaria medicines and identified stock outs by telephoning health facility in-charges or getting reports during their integrated support supervision visits. These systems were time-consuming and the reporting was not in real-time.

As part of the USAID-funded Stop Malaria Program (SMP)—project supporting malaria programs in 34 districts in Uganda through activities that address malaria prevention, diagnosis and treatment, capacity strengthening in M&E, and integrated support supervision—the MOH’s mTRAC SMS-based system is being utilized to track stock levels of essential malaria medicines at health facilities.

The mTRAC system was developed by UNICEF with funding from DFID and WHO, and adopted by the MOH. It has been rolled-out to all Uganda’s districts with USAID Implementing Partners (IP) playing a key role in facilitating the roll-out and in ensuring its ongoing use by the District Health Teams. As a USAID IP, SMP began providing support on the mTRAC system implementation since November 2011.

ABOUT mTRAC SMP

All USAID IPs have supported the MOH’s rollout of its electronic Health Management Information System (HMIS) through printing HMIS tools, training of district health team staff, assisting districts to complete accurate and timely reports, and providing internet connectivity. mTRAC is part of the overall electronic HMIS system.

The MOH’s mTRAC system uses SMS technology to track stock levels of essential malaria medicines at health facilities. District health workers have been trained to summarize the data entered in the weekly HMIS form as an SMS string using their own cell phones. The reports are then sent to a District Dashboard in the mTRAC system, which is accessed and approved by the District Health Officer. The MOH-Resource Center also accesses this data and compiles a summary report based on the data submitted the previous week. The report is shared with the Stop Malaria Program, which then works with districts to avoid or correct stock problems by redistributing medicines from over-stocked facilities to facilities facing imminent stock-out, and by contacting
National Medical Stores (NMS) to advocate for restocking.

**EVALUATION AND RESULTS**

While early data cannot yet clearly state the effect of mTRAC, the following graph does suggest fluctuations in stock-outs have appeared to decrease. Further evaluation must be completed before attributing improvements to mTRAC.

**LESSONS LEARNED**

- The success of any electronic solution depends on the follow-up support provided after the initial training and SMP fills this critical gap by providing ongoing support supervision to mTRAC users.
- mTRAC also has some challenges, such as structural issues with the HMIS weekly surveillance form because the form does not disaggregate data for some items, such as quinine, which is not disaggregated by type (injectable or tablets) on the form. Thus, District health teams have to follow up with the actual health facilities with stock-outs to determine whether it is injectables or tablets that are needed.
- Poor network connection and congestion, especially at reporting times, is also sometimes a deterrent to consistent reporting by the health facility in-charges. As part of the mTRAC Steering Committee, USAID is working to address these challenges.

**CONCLUSION**

The mTRAC system may be contributing to the quick and efficient reporting of stock-outs of essential anti-malarial drugs, enabling medical personnel to respond to disease outbreaks in record time and take preventative measure.

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**GEOGRAPHIC COVERAGE**

Uganda

**IMPLEMENTATION PARTNERS**

Johns Hopkins School of Public Health: Center for Communication Programs; Partners: Malaria Consortium, Infectious Diseases Institute (IDI), Communication for Development Uganda (CDFU) and the Uganda Health Marketing Group (UHMG)

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