

Rapid reporting systems: tracking data to defeat malaria

As countries continue to make progress reducing malaria infections, the need for timely and accurate reporting of remaining cases of the disease is more important than ever. Since 2000, malaria-endemic countries across Africa have worked tirelessly to protect vulnerable populations with insecticide-treated bednets, indoor spraying of insecticides, effective medicines, and new diagnostics. This scaling up of malaria control efforts has led to dramatic drops in malaria illnesses and deaths in many countries, paving the way for these countries to begin to work on eliminating the disease altogether. As malaria cases diminish, using localized rapid reporting systems to track and treat remaining cases of the disease is essential to maintain progress made to date and ensure that a resurgence of malaria does not occur.

The importance of timely data

A system that can reliably record and convey information quickly is critical to countries moving from controlling malaria to the pre-elimination phase. These systems—rapid reporting systems—help countries identify and respond to malaria infections in real time—cases of the disease that large-scale or infrequent surveys would otherwise miss. These faster, more frequent flows of information improve the understanding of local levels of malaria burden and improve decision-making abilities, thus enabling efficient targeting with malaria interventions and commodities to those who need them most.

Data on malaria burden is transmitted every week by health officials using mobile phones.



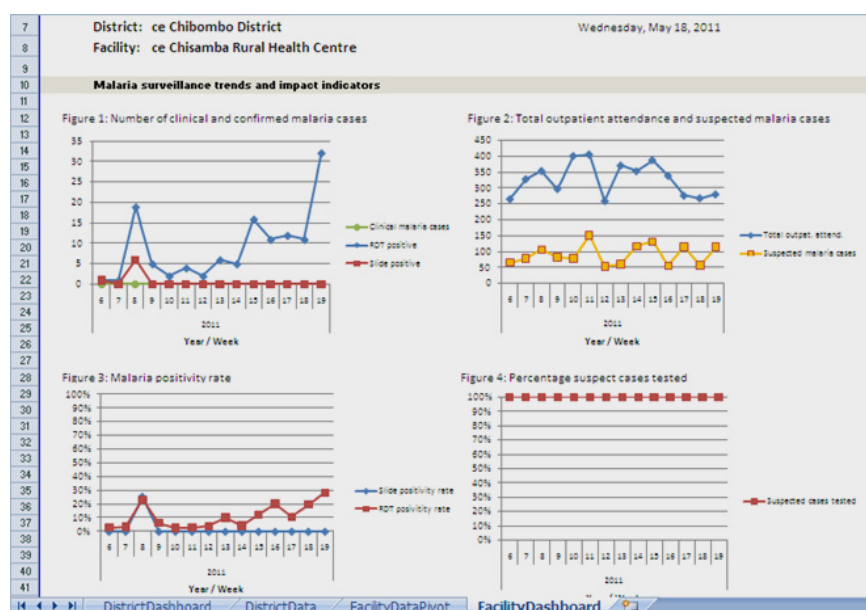
Data forms to be used in the rapid reporting system can be uploaded to affordable mobile phones like the Nokia 2330 and 2690. Some of the indicators that health officers send over the mobile phones include cases of malaria confirmed with rapid diagnostic testing (RDTs), suspected cases of malaria that were not confirmed with a test, total outpatient attendance at the health facility, number of courses of malaria treatment in stock, and number of RDTs in stock.

Using cell phones to transmit data in Zambia

Zambia's National Malaria Control Centre has implemented a rapid reporting system in response to decreasing levels of malaria in Southern and Western Provinces. Every week, health facility workers submit basic information on malaria burden by mobile phones that are enabled with a JAVA-based data entry form. Once data is entered into a phone, it is sent through a data-enabled mobile telephone network to a centralized data server. This server is pre-programmed with an Excel dashboard for convenient presentation of information and reports.

Health officials can then access this data on the internet, viewing the local malaria situation in real time and monitoring facility-level progress in reducing malaria transmission. Importantly, this system links a community's malaria burden with its malaria commodities, thereby streamlining the supply chain. A process that used to take three or four months to complete now takes only one week, allowing countries critical time to respond to any changes in parasitemia rates.

The development of the malaria rapid reporting system portends revolutionary advances in data reporting across Africa.



A computer screen showing a weekly summary of rapid reporting data for Chibombo District.

Setting a standard for success

Prioritized malaria information has been adopted from existing Health Management Information System (HMIS) forms to minimize training and reporting frustrations and to facilitate improved compliance with monthly HMIS reporting requirements. The software used for the reporting system, DHIS 2, is freely available over the internet and is customizable for this kind of use. With the rapid spread of data-enabled cell phone networks and internet access in Africa, the system portends revolutionary advances in HMIS reporting. Zambia's rapid reporting system is a model of success, providing the opportunity to expand the system to other national malaria control programs in the region.

MACEPA  **PATH**
Malaria Control and Evaluation Partnership in Africa

macepa@path.org
www.path.org/macepa

October 2011