Market trends for malaria blood testing in sub-Saharan Africa, 2009-2014
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The ACTwatch Group*

Background

In 2012, the World Health Organization (WHO) launched the Test, Treat, Track initiative recommending confirmatory testing prior to antimalarial treatment. National malaria control programs (NMCP) across sub-Saharan Africa (SSA) subsequently aligned national guidelines with this recommendation. Strategies to scale up testing using malaria rapid diagnostic tests (mRDT) were introduced by NMCPs.

We examine malaria testing availability, price and market share using national market survey data collected by the ACTwatch project.

Methods

When and where: Repeat cross-sectional malaria disease and symptom survey were conducted in Benin, Kinshasa and Katanga provinces of the Democratic Republic of Congo (DRC), Kenya, Madagascar, Nigeria, Tanzania, Uganda and Zambia.

How: A census of public and private outlets with potential to distribute antimalarials or provide malaria blood testing was conducted among a representative sample of administrative units.

The questionnaire: A product audit documented product information, retail price and amount distributed for antimalarials and malaria tests provided during the last week for all antimalarials and mRDT in stock.

Availability, price and number of tests recently provided was also captured for malaria microscopy.

Results

Malaria RDT availability, among antimalarial stocking outlets

Trend data show that public sector mRDT availability is variable over time and across different contexts, suggesting that countries are at various stages in the scale-up of mRDT. Within the private sector, while modest improvements in mRDT availability have occurred in some contexts, testing availability remains low, ranging from 1% in Benin to 13% in Kenya in 2014.

Relative Malaria Testing Market Share

The public sector typically provided the majority of blood testing and most tests were conducted using mRDT. Notable exceptions were found in the DRC and Kenya where the private sector had a large testing market share, and where public sector testing using microscopy was common. With the exception of some private sector mRDT use in Katanga and Nigeria, private sector testing using mRDT was very limited and where testing was conducted in the private sector, malaria microscopy was commonly used.

Discussion

Confirmatory testing is largely not available among private sector outlets providing antimalarials across study contexts and countries. With the exception of some private sector mRDT use in Nigeria and Katanga, private sector testing using mRDT is very limited and where testing is done in the private sector, malaria microscopy is common.

Where mRDT are available, financial incentive to test before treating with quality-assured ACT is apparent with respect to adult testing and treatment. This incentive is generally not present with respect to testing and treatment for young children.

Limited availability of malaria testing in the private sector is likely a barrier to increasing coverage of confirmatory testing prior to treatment given the high relative antimalarial market share for the private sector in many malaria endemic countries in sub-Saharan Africa.

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