SP availability and (mis) use in sub-Saharan Africa: Antimalarial market data from 8 countries

64th Annual Society of tropical Medicine and Hygiene, Oct 25th – 29th, 2015

The ACTwatch Group*

Background

As evidence of reduced chloroquine efficacy against *plasmodium falciparum* mounted in the 1990's, sulfadoxine-pyrimethamine (SP) became first-line malaria treatment in many endemic countries in sub-Saharan Africa (SSA). Between 2002-2005, countries in SSA adopted artemesinin combination therapies (ACT) as first-line treatment. SP is still recommended by the WHO and used across SSA for intermittent preventive treatment of malaria during pregnancy (IPTp).

We examine availability and distribution of SP using national antimalarial market survey trend data collected by the ACTwatch project.

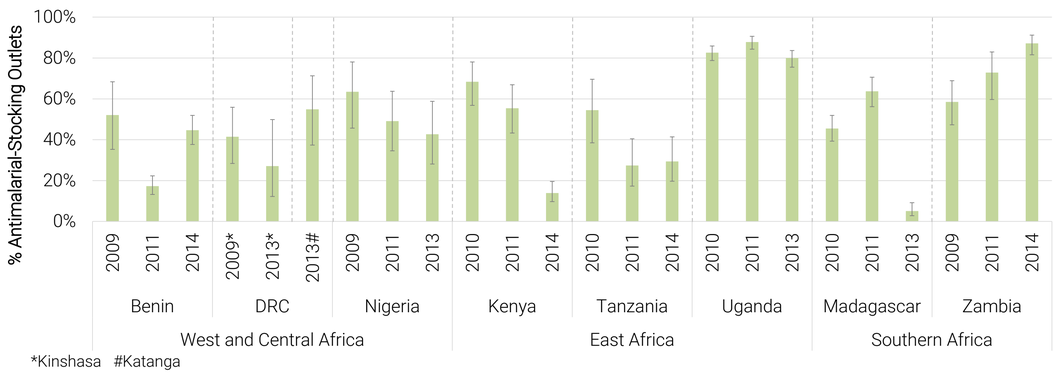
Methods

Repeat cross-sectional malaria medicine outlet surveys were conducted between 2009-2014 in Benin, the Democratic Republic of the Congo (Kinshasa and Katanga provinces), Kenya, Madagascar, Nigeria, Tanzania, Uganda and Zambia. A census of public and private outlets with potential to distribute antimalarials was conducted among a representative sample of administrative units. A drug audit documented product information, retail price and amount distributed to consumers during the last week for all antimalarials in stock.

Results

Trends in SP availability, among all public health facilities

With the exception Zambia, all countries experienced recent public sector declines in SP availability. During the most recent survey round, fewer than half of the public sector had SP in stock with the exception of high availability in Uganda and Zambia (>80%) and moderate availability in Katanga (55%).



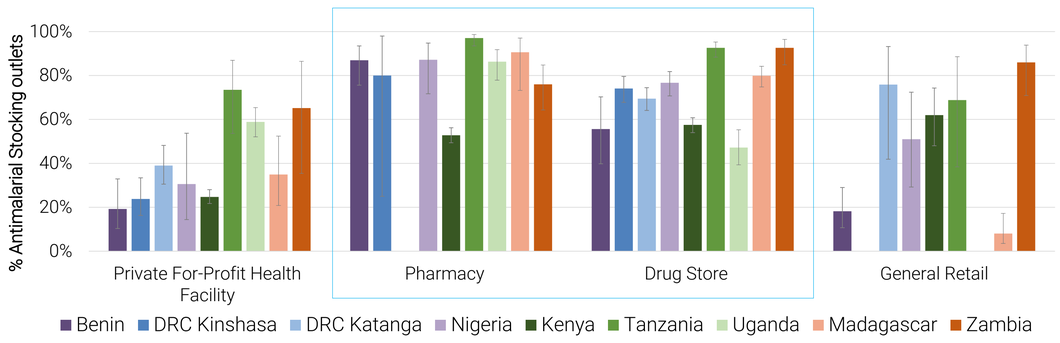
*Kinshasa #Katanga

SP availability in the private sector in 2013 & 2014

SP availability was generally relatively low in private for-profit health facilities, with exceptions in Tanzania, Uganda and Zambia (>50%).

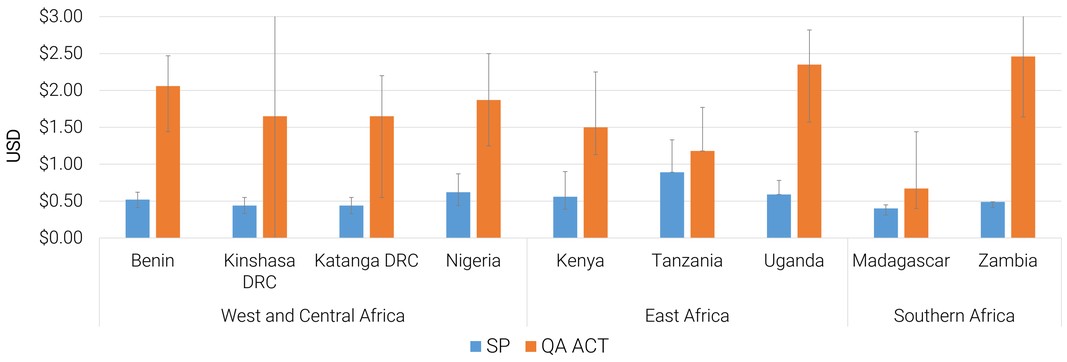
SP was available in the vast majority of pharmacies across countries with exceptions in the DRC, and was available in half or more drug stores in all countries except Uganda.

SP was commonly available where informal providers were distributing antimalarial including retail outlets, and mobile vendors (Benin and Madagascar)



Private sector price for SP and quality-assured ACT in 2013 & 2014

The median private sector price for one adult equivalent treatment dose (AETD) of quality-assured ACT was higher than the price of one SP AETD across all countries. QA ACT was slightly more expensive than SP in Tanzania and Madagascar, but elsewhere was generally 3 to 4 times more expensive than SP, and 5 times more expensive than SP in Zambia.



SP MARKETS AND PRODUCTS HIGHLIGHTS:

1. SP distributed in the private sector is usually available in packages containing 3 tablets and **marketed for use to treat malaria infection in people of all ages**.
2. Dosing instructions for treatment of malaria are typically printed on the package or a package insert. **Instructions specify the number of tablets to be given** according to age and/or weight.
3. Some products specify that SP is indicated for **resistant or chloroquine-resistant malaria**.
4. Product audits identified several brands and manufacturers of SP and **each country. Between 10-15 unique brands were available per country, and over 40 brands were identified in Nigeria.**
5. **Each country has a unique set of leading manufacturers**. The majority of SP products audited were manufactured locally in Uganda (90%) and Kenya (80%) and local manufacturing was also common in Nigeria and Tanzania (40-50%). India was a common source of SP products in the DRC, Zambia, Benin and Nigeria. More than half of SP products audited in Madagascar originated from China, and in Tanzania from neighboring Kenya.

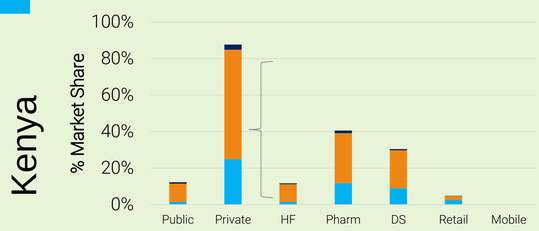
Relative SP market share

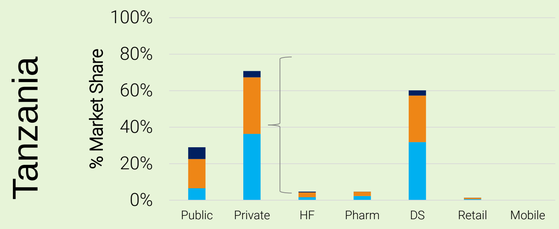
SP market share ranged from approximately one-quarter of all antimalarials distributed in Benin, Kenya and Uganda to over 40% in Katanga and Tanzania. With the exception of Zambia, SP was primarily distributed by the private sector, most commonly by drug stores. One-quarter to one-third of all antimalarials distributed were SP courses sold by drug stores in Tanzania, Nigeria, Kinshasa, Katanga. In Kenya and Madagascar, SP distribution by pharmacies accounted for approximately 10% of all antimalarial distribution.

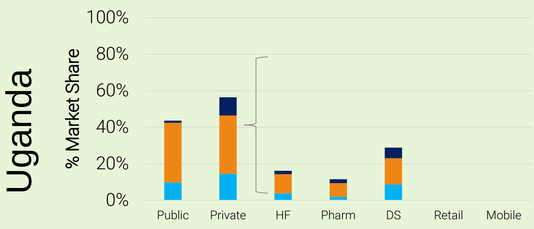
East Africa

Private Sector Key
HF Private For-Profit Health Facility
Pharm Pharmacy
DS Drug Store
Retail General Retailer
Mobile Mobile Drug Vendor

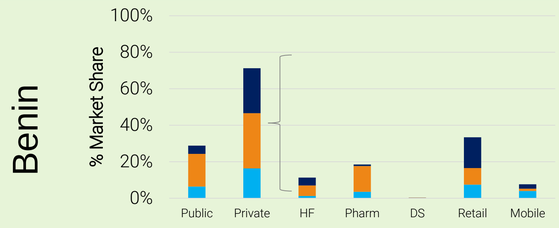
ACT
SP
Monotherapy

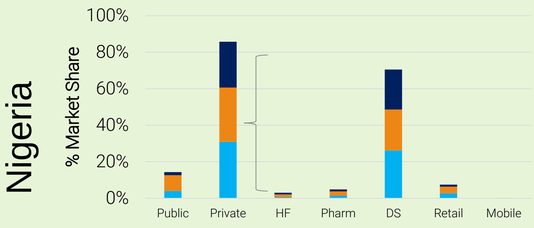


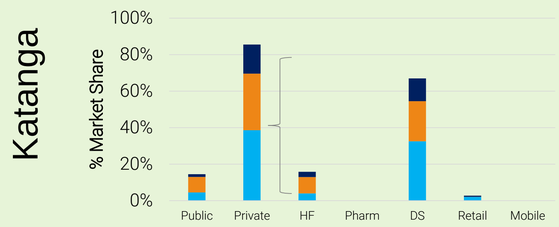


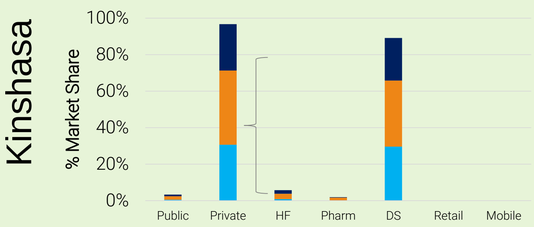


West & Central Africa

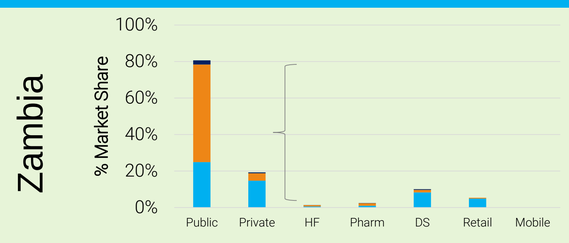


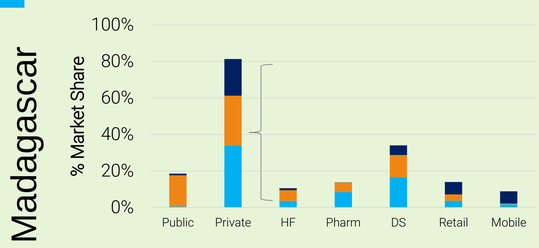






Southern Africa





Discussion

The widespread availability and use of SP is likely a key barrier to increasing uptake of quality-assured ACT for malaria case management. SP is relatively inexpensive, and frequently dispensed in the private sector, most commonly by drug stores. Available evidence suggests that SP is marketed and distributed for managing malaria in people of all ages, rather than restricted to use for IPTp. The SP market is unique in each country, dominated in some countries by local manufacturers and in others by imports from India or China. The diversity of the SP market and the high relative market share suggest ongoing high demand for this medicine despite discontinuation of its use for case management due to drug resistance. Drug quality of the numerous products manufactured locally or imported is unknown but of interest given high availability and use including use for IPTp.

The decline in SP availability among public health facilities is concerning because IPTp is an important intervention for pregnant women in malaria-endemic countries. Some countries including Kenya have recently identified specific sub-national target areas for IPTp. Declines in readiness for IPTp at national level in countries like Kenya may be explained by this targeting.

* ACTwatch is a Population Services International (PSI) research project implemented in partnership with the London School of Tropical Medicine and Hygiene and Ministries of Health in project countries. ACTwatch is funded by the Bill and Melinda Gates Foundation, DFID and UNITAID. Poster contents do not necessarily reflect the views of the funders.

For more information please visit www.actwatch.info or contact Megan Littrell at mlittrell@psi.org.