

# **Malaria Testing and Treatment Market Data**

Malaria RDT and fever case management in the private health care sector in Africa consultative working meeting 20-21 October, 2015 Entebbe, Uganda

www.actwatch.info

**ACTwatch** is a research project implemented by PSI and Ministries of Health in **13 countries** 

- **45 outlet surveys** conducted between 2008-2015
- Most outlet surveys are conducted at national level
- Outlet surveys measure availability, price, and market share in the public and private sectors for malaria medicines and diagnostics



#### What is an outlet survey?

- A study of outlets providing malaria medicines or diagnostics
- What is an outlet?
- Public and private hospitals/clinics/health centres, pharmacies, drug stores, retail shops, mobile drug sellers, CHWs
- How do we select outlets for the study?
- Select a representative sample of clusters
- Visit all outlets in the cluster and screen for malaria testing and treatment
- What information do we collect? Audit of all malaria medicines and diagnostics in stock including product information, retail price, and amount recently distributed to customers



# Where are most antimalarials distributed to individual consumers?





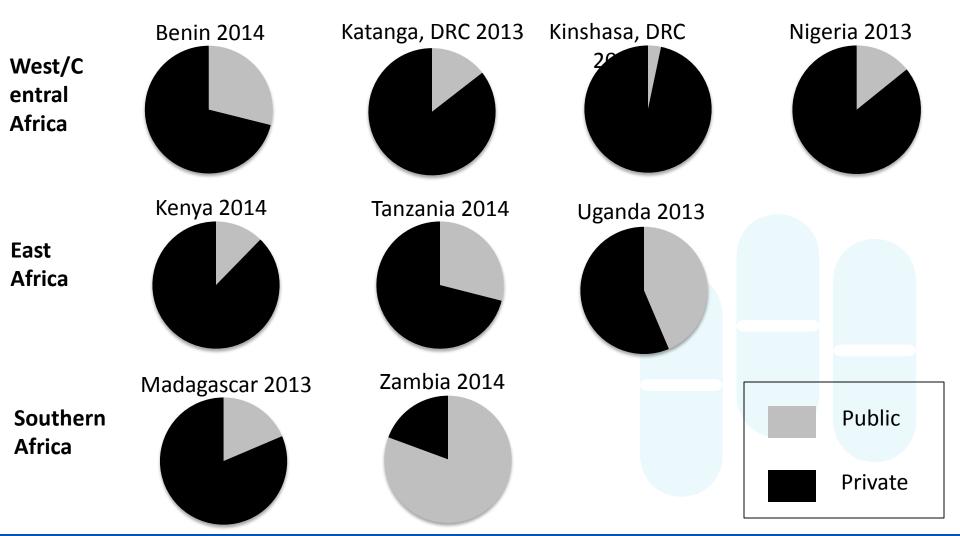




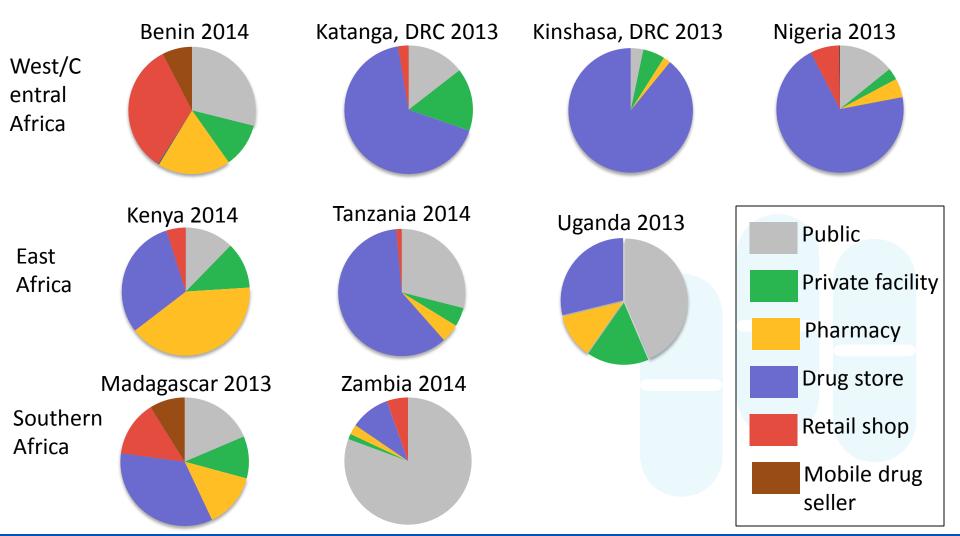


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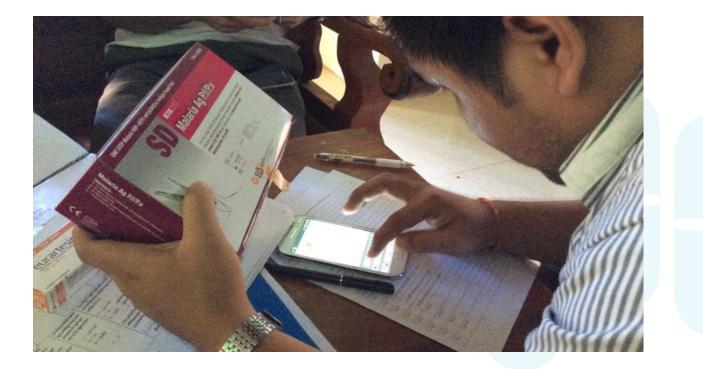
**Results Antimalarial market share** *Proportion of antimalarials distributed to consumers by the public and private sector, 2013-14* 



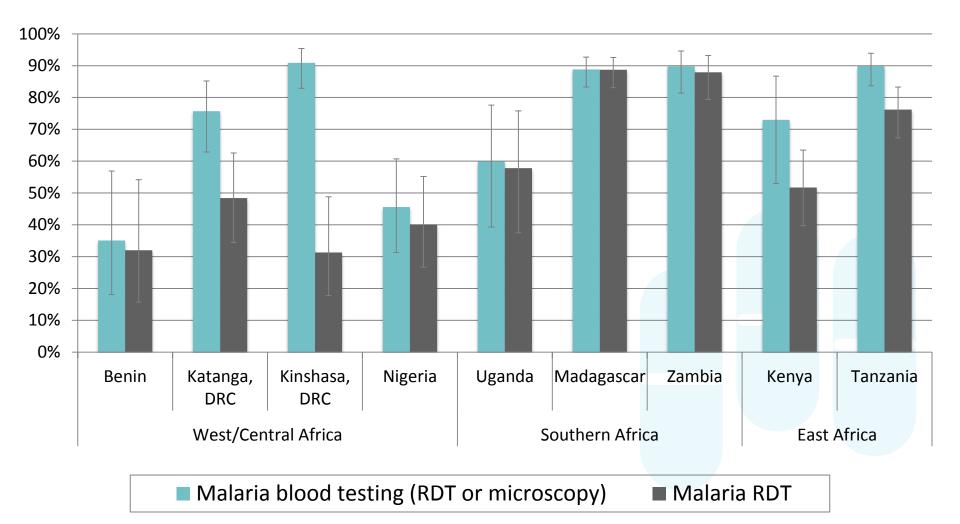
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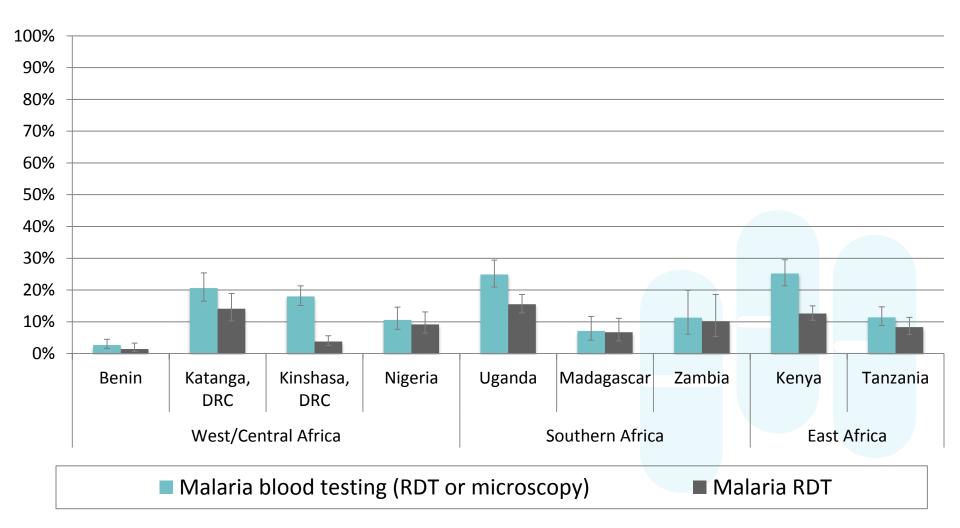
# Where antimalarials are distributed, is malaria blood testing available?



**Results Availability of malaria blood testing** *Proportion of <u>public sector</u> antimalarial-stocking outlets with malaria blood testing available, 2013-14* 



**Results Availability of malaria blood testing** *Proportion of private sector antimalarial-stocking outlets with malaria blood testing available, 2013-14* 

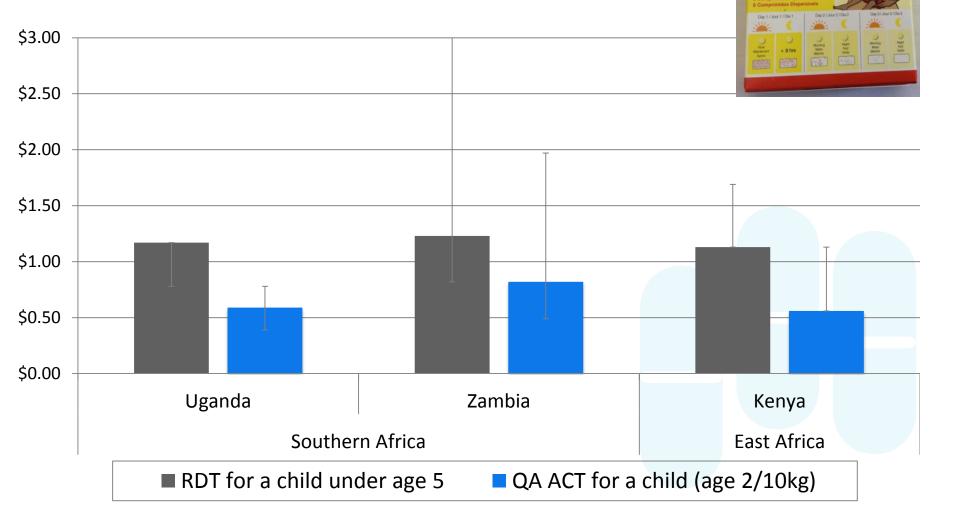


# How much does RDT testing cost compared to QA ACT treatment in the private sector ?





**Results Private sector price for children** *Median private sector price including fees, US dollars, 2013-14* 



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picht: 5 kg to less than 15 kg

ids: 5 kg å moins de 15 kg ra crianças so: 5 kg a menos de 15 kg

Pour ent

Artemether/Lumetantrine 20 mg/120 mg

US dollars, 2013-14 Cipla \$3.00 \$2.50 \$2.00 \$1.50 \$1.00 \$0.50 \$0.00 Zambia Uganda Kenya East Africa Southern Africa ■ RDT for an adult QA ACT for an adult (60kg)

 $(\mathcal{A})$ 

**Results Private sector price for adults** Median private sector price including fees,

#### **Summary**

The private sector distributes more than half of all antimalarials at national level in many countries

Including health facilities, pharmacies, drug stores, and retail shops

Private sector providers distributing antimalarials often do not have malaria blood testing available

 Patients seeking fever treatment at these outlets do not have opportunity for confirmatory testing on site

The price of malaria RDTs relative to quality-assured ACT:

- Could be an incentive to test, particularly for adults
- Could be a disincentive to test, particularly for small children



## How is market share estimated?

- We visit **all outlets** within a sampled cluster that have potential to distribute antimalarials
- We collect information about each unique antimalarial in stock including product information and amount reportedly distributed to customers in the past 7 days



- We use the product and distribution information to determine the total number of courses distributed. We calculate relative distribution for different types of outlets and antimalarials
- We also calculate blood testing market share by outlet type and by type of test (RDT and microscopy) using provider reports on number of tests performed in the past 7 days
- We calculate relative market share for RDT manufacturers as well

#### Where does ACTwatch collect malaria market data?

- Benin 2009, 2011, 2014, 2016
- Cambodia 2009, 2011, 2013, 2015
- DRC (Katanga, Kinshasa) 2009, 2013, 2015
- Kenya 2010, 2011, 2014, 2016
- Lao PDR 2015
- Madagascar 2010, 2011, 2013, 2015
- Myanmar 2012, 2013, 2014, 2015
- Nigeria 2009, 2011, 2013, 2015
- Tanzania 2010, 2011, 2014, 2016
- Thailand 2015
- Uganda 2010, 2011, 2013, 2015
- Vietnam 2015
- Zambia 2009, 2011, 2014



# Additional Slides

#### **The TSG Audit Sheet**

TABLET, SUPPOSITORY & GRANULE DRUG AUDIT SHEET (TSG)

OUTLET ID: [ ] H ] H ] H ] ]

| Sub-outlet<br>code<br>[]<br>Product<br>number<br>[]_]  |  | 1. Generic I | iame   |  | 2. Strength [].[]mg []].[_]mg []].[_]mg        |  | 2a. Is this base strength?<br>[]<br>1 = Yes<br>[] 0 = No<br>8 = Don't know<br>[]<br>If no, specify salt:<br>[] |   |  | 3. Dosage<br>form/formulation<br>1 = Tablet<br>2 = Suppository<br>3 = Granule  |     | 4. Brand name<br>(Include weight and age information)  |  |  |
|--|--|--------------|--|--|--|--|--|---|--|--|-----|--|--|--|
|  |  |              | Country of nufacture There are a There are a There are a There are a tablets/ su granule sa each:<br>1 = Pa 2 = Pa |  | total of<br><br>positories/<br>lets in<br>kage | a fixed-dose<br>combination<br>(FDC)   |  | 9. Does<br>product<br>have the<br>Green leaf<br>logo?<br>1 = Yes<br>0 = No<br>8 = Don't<br>know | consumers (<br>the total # a<br>This outlet s<br><u>OR</u><br>This outlet s<br>sachets in th | utlet sold [ ] tablets/ suppositories or gran<br>ts in the last 7 days<br>oplicable = 995; Refused = 997; Don't know = 998 |     |  | 7 OR record<br>Id)<br><u>st 7 days</u><br>or granule   | 11. Stocked out<br>at any point in<br>the past <u>3</u><br><u>months</u> ?<br>1 = Yes<br>0 = No<br>8 = Don't<br>know |
| 12. Retail selling price         []]         tablets, suppositories or granule         sachets cost an individual customer         []] |  |              | 13. Wholesale purchase price         For the outlet's most recent wholesale purchase         []                    |  |  | 14. Why do you stock this medicine [S<br>PRODUCT]?<br>Do not read list.<br><u>Circle ALL</u> responses given<br>Free supply<br>Profitable<br>Recommended by the governme<br>Low price<br>Customer demand or preference<br>Positive brand reputation<br>Often prescribed by doctors |  |   | A<br>ernment C<br>rence E<br>F   | i<br>2<br>2  | nts | 16a. Is this medicine a tablet?         1 = Yes       0 = No         If No then continue to the next oudit sheet.         16b. Does this medicine have only 1 active ingredient?         1 = Yes       0 = No         If No then continue to the next oudit sheet.         16 No then continue to the next oudit sheet.         16c. Is the active ingredient one of the following?         ARTEMETHER |  |  |
| Free = 000000<br>Refused = 999997<br>Don't know = 999998   |  |              | Free = 00000000<br>Refused = 99999997<br>Don't know = 99999998   |  |  | Most effective for treating mal<br>Don't know<br>Other<br>specify  |  |   |  | 1 =<br>If Ye<br>mod  |     |  | RTESUNATE<br>HYDROARTEMISININ<br>S 0 = No<br>then complete oral AMT<br>le after "Antimalarial<br>out section" completed. |  |

## Adult Equivalent Treatment Dose (AETD)

- Antimalarials have variation in Als, dosage forms, strengths and package sizes. A standardized unit is needed to compare price and amount distributed.
- AETD is the standard unit used for price and market share indicators.
- One AETD = the number of mg of an antimalarial drug required to treat a 60kg adult.
  - According to WHO treatment guidelines.
- AETD has limitations: individuals may buy antimalarials in doses other than an AETD.
  - Indicators may not represent price paid by consumers for treatment or number of patients treated.
  - Systematic variations affect interpretation.

## **ACTwatch Outlet Survey Limitations (1)**

- Outlet surveys provide information on availability and relative distribution of antimalarials and malaria blood testing.
  - The survey does not provide information about how individual patients are managed (testing and treatment based on results).
- The AETD unit of analysis used for price is useful for comparing <u>relative</u> price of medicines.
  - The AETD does not necessarily reflect <u>actual price</u> paid by customers for malaria treatment.
- Market share provides information on relative distribution of <u>antimalarials</u> using the AETD for the unit of analysis.
  - Market share does not reflect relative numbers of <u>suspected cases managed</u>.

## **ACTwatch Outlet Survey Limitations (2)**

- Availability of banned or non-recommended medicines, or availability of medicines among non-registered outlets may be underestimated due to lack of full participation and cooperation.
- ACTwatch does not include a drug quality testing component and cannot report on fake or substandard medicine availability.
  - When results are presented regarding *quality-assured ACT*, we are referring to medicines that according to drug packaging information have WHO pre-qualification or EMA approval.