

# Malaria RDTs in the private retail sectors of malaria endemic countries

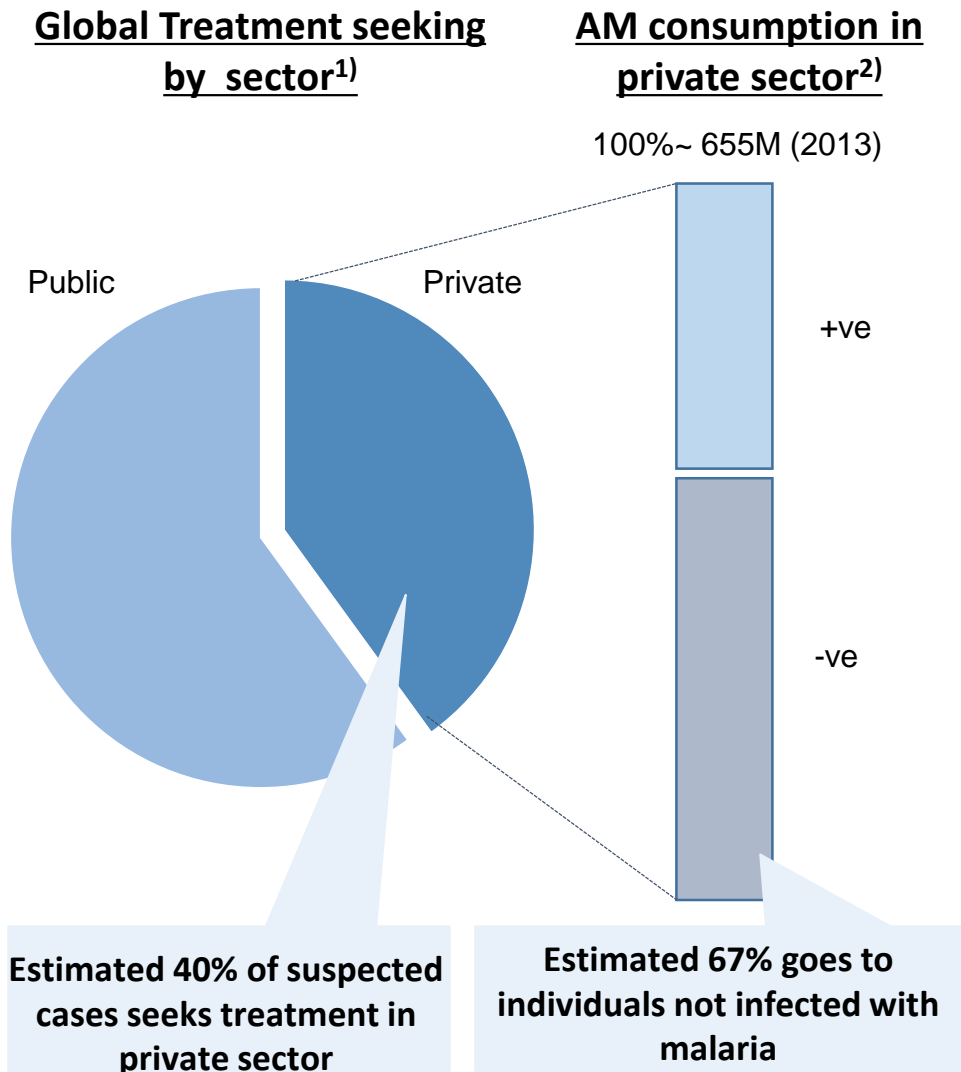
## *A review of the evidence*



## **Malaria rapid diagnostic tests (RDTs) and fever case management in the private health care sector in Africa: a consultative working meeting**

Entebbe, Uganda  
Oct 20 & 21, 2015

# The scale up of malaria Rapid Diagnostic Tests (mRDT) has potential to restrict antimalarial drugs to confirmed cases of malaria



## **Rationale**

- Presumptive treatment in low and medium endemic settings leads to resource wastage<sup>3)</sup>
- Availability and use of confirmatory diagnosis in private sector is low in most endemic countries (~11% of children under 5 receive confirmatory diagnosis<sup>1)</sup>)
- mRDTs are an alternative to microscopy, especially in the more remote settings<sup>4)</sup>
- Many National Malaria Control Programs are considering scaling up mRDTs in their private sectors
- Little evidence exists on how to best do so or what the effect is on targeting of ACT/AM or other outcomes

1)WMR 2013, 2) Cohen JM, Woolsey AM, Sabot OJ, Gething PW, Tatem AJ, Moonen B: Public health. Optimizing investments in malaria treatment and diagnosis. *Science* 2012, 338:612-614., 3) D'Acromont V, Lengeler C, Mshinda H, Mtasiwa D, Tanner M, Genton B: Time to move from presumptive malaria treatment to laboratory-confirmed diagnosis and treatment in African children with fever. *PLoS Med* 2009, 6:e252., 4) Maltha J, Gillet P, Jacobs J: Malaria rapid diagnostic tests in endemic settings. *Clin Microbiol Infect* 2013, 19:399-407.

# In April 2013, ACT Consortium and the RBM CMWG brought together evidence for preliminary guidance to RBM Board

## Objectives

- To share the results of research activities and early pilot interventions to introduce diagnostic testing for malaria into the retail private sector
- To extract lessons learned and identify key bottlenecks and success factors from operational research and limited experiences to inform the future design of pilot projects for deploying diagnostic testing in the private sector in malaria endemic countries

## Approach

- Review results of more than a dozen small-scale studies and pilots from eight countries in Africa and Southeast Asia

## Emerging Themes<sup>1)</sup>

- Ensure availability for affordable, quality assured mRDTs to be scaled-up sustainably in the market
- Ensure safe practices in mRDT use
- Support uptake of mRDTs and adherence to results by providers
- Encourage population demand for mRDTs
- Recognize contextual factors not easily amenable to change

## Next steps

- Organize follow up meetings to discuss additional findings from ongoing and new studies and pilots to develop more definitive recommendations for countries on best practices for scaling-up comprehensive fever case management in the private retail sector
- Systematically review the evidence (published and unpublished) of mRDT introduction in private retail sectors (Revised version to be re submitted by 12/31)

1) Full report: [http://www.rbm.who.int/partnership/wg/wg\\_management/docs/medsellersRBMmtgreport.pdf](http://www.rbm.who.int/partnership/wg/wg_management/docs/medsellersRBMmtgreport.pdf)

# Preliminary findings

## Study characteristics

- 12 studies included, all in Sub-Saharan Africa, except a study in Cambodia
- Almost all studies included registered but small-scale retailers with limited biomedical training (e.g. Drugshops, PPMV, ADDO, Chemical shops)
- Special permission was given to sell or perform mRDTs in most studies
- Substantial human and commodity resource support (i.e. training, supervision, referral program, demand generation, waste disposal)
- Studies showed variety in evaluation design but similar outcome focus:
  - RCTs (6), quasi experimental (4), observational (3)
  - Outcomes were targeting ACT treatment (RDT uptake, adherence, cost) rather than management of febrile illnesses

## Outcomes

- Safe performance of RDTs: Range 16-99% (median ~93%)
- Uptake: Range 9-98% patients getting an RDT (median ~56%)
- Adherence to positive RDTs: Range 30-99% RDT positive patients getting an ACT (median ~86%)
- Adherence to negative RDTs: Range 2-51% RDT negative patients getting an antimalarial (median ~41%)
- Antibiotic use for RDT negative febrile cases reported: Range 4-58% (median ~13% v small numbers)

# Conclusions

## Performance

- Generally, providers were able to accurately and safely perform the mRDT
- Providers also seemed able to interpret mRDT results correctly

## Uptake & Adherence

- All of the studies with both an intervention and a control arm showed a reduction in ACT usage in the intervention arm compared to the control arm, suggesting that increased testing rates can help reduce resource wastage
- Although a larger proportion of patients that tested positive received ACTs compared to those testing negative, the variety in adherence to positive and negative results show that it remains unclear whether mRDTs can improve targeting ACTs to only those that have malaria or not

## Informing scale up

- Simply introducing mRDTs with minimal oversight appears to be ineffective in promoting appropriate (and therefore cost-effective) use
  - Studies with longer and interactive trainings, close and frequent supervision, low or no cost for the mRDT to the patient generally achieved higher uptake and adherence levels
- It remains unclear what makes up an optimal and cost effective training and supervision program that can meet 'real world' challenges (i.e. high staff turnover, referral system, waste management or data monitoring needs)

**The studies to date have mainly been small-scale, closely controlled pilots and therefore do not provide sufficient insights into these requirements for large scale implementation.**

## ACKNOWLEDGEMENTS

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