Tanzania: ACTwatch Outlet Survey 2014
Presentation outline

ACTwatch Project 3
ACTwatch in Tanzania 5

Outlet survey methods 7
Study population 7
Sampling 8
Product audit 9
Districts 10

Outlet survey results 11
Antimalarial availability 15
Antimalarial market share 33
Antimalarial price 37
Malaria diagnostic availability 38
Provider drug knowledge 42
Urban/rural comparisons 45

Summary of National Trends 55
Progress against NMCP (2014-2020) 60
The ACTwatch project
ACTwatch produces standardized malaria medicine & diagnostic evidence in 13 countries
National Outlet Surveys

- 2010
- 2011
- 2014
Context for ACTwatch Outlet Surveys in Tanzania

- Co-paid ACTs – Global Fund
- AMFm
- Co-payment mechanism
- ADDO program
- RDT pilot

Years:
- 2009
- 2010
- 2011
- 2012
- 2013
- 2014
- 2015
Outlet Survey Methods
Study Population

- Study Population: Outlets with antimalarials or with malaria blood testing available

- What is an outlet?
  - Public Health Facility
  - Private Not For-Profit Facility
  - Private For-Profit Facility
  - Pharmacy
  - Accredited Drug Dispensing Outlet (ADDO)
  - Duka la Dawa Baridi (DLDB)
  - General retailer
Sampling

- A representative sample of 30 districts was selected.
- Within sampled districts, a representative sample of urban and rural wards was selected.
- A census was completed of all potentially eligible outlets.
- Additional wards were selected from within each sampled district for an over-sampling of public health facilities, private for-profit facilities, pharmacies, and ADDOs (Booster sample).
- Screen for antimalarials in stock or malaria blood testing available.
Product Audit

When products are in stock: Product audit

- Record information about each antimalarial product in stock:
  - Formulation (tablet, syrup, injection, etc.)
  - Brand/generic names
  - Strength
  - Manufacturer
  - Country of manufacture
  - Amount distributed in the past week
  - Retail and wholesale price

- Record information about each mRDT product in stock
<table>
<thead>
<tr>
<th>Districts</th>
<th>ILALA</th>
<th>LUSHOTO</th>
<th>NZEGA</th>
</tr>
</thead>
<tbody>
<tr>
<td>BAGAMOYO</td>
<td>IRINGA MANISPA</td>
<td>MANYONI</td>
<td>RUNGWE</td>
</tr>
<tr>
<td>BUTIAMA</td>
<td>KAHAMA</td>
<td>MBOGWE</td>
<td>SAME</td>
</tr>
<tr>
<td>CHAMWINO</td>
<td>KALAMBO</td>
<td>MISSENYI</td>
<td>SENGREMA</td>
</tr>
<tr>
<td>HANANG</td>
<td>KASULU MJI</td>
<td>MOROGORO MANISPA</td>
<td>SIKONGE</td>
</tr>
<tr>
<td>KYELA</td>
<td>KINONDONI</td>
<td>MPANDA</td>
<td>SONGEA MANISPA</td>
</tr>
<tr>
<td></td>
<td>KWIMBA</td>
<td>MVOMERO</td>
<td>SUMBAWANGA MANISPA</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>TEMEKE</td>
</tr>
</tbody>
</table>
Outlet Survey Results - Antimalarials
Outlet Survey Sample

4,925 outlets enumerated

201 outlets not screened

4,724 outlets screened

2,564 outlets did not meet screening criteria

2,160 outlets met screening criteria

4 outlets not interviewed

2,156 outlets interviewed
What is the availability of antimalarials among these screened outlets?
Availability of any antimalarial in the public sector

Among all screened public outlets, across survey round

![Graph showing percentage of outlets over time.](image-url)
Availability of any antimalarial in all sectors

Among all screened outlets, across survey round

Percentage of outlets

2010
2011
2014

Public Health Facility
Private-For-Profit-Facility
Pharmacy
ADDO
DLDB
General Retailer
What types of outlets are stocking antimalarials?
Market Composition

Outlet type, among outlets stocking any antimalarial, across survey round

2010
N=415

2011
N=524

2014
N=535

Public Health Facility
Private Not For-Profit Facility
Private For-Profit Facility
Pharmacy

ADDYO
DLDB
General Retailer
Pharmacy
What types of antimalarials were found in the outlets?

- Quality-assured ACTs
- Quality-assured ACTs with ‘green leaf’ logo
- Non quality-assured ACTs
- Sulfadoxine-Pyrimethamine
- Non-oral artemisinin monotherapies
- Other non-artemisinin therapies
Quality-assured ACTs (QA ACT)

What are quality-assured ACTs (QA ACT)?

- QA ACTs are ACTs with WHO pre-qualification from a manufacturer with “Good Manufacturing Practices” (GMP)
  - Includes any ACT that appeared on the Global Fund’s indicative list of assured antimalarials prior to data collection
  - Includes any ACTs that previously had C-status in an earlier Global Fund quality assurance policy
  - Includes any ACT that had been granted regulatory approval by the European Medicines Agency
Availability of QA ACTs in the public sector
Among all public facilities with at least one antimalarial in stock, across survey round
Availability of QA ACTs in all sectors

Among all facilities with at least one antimalarial in stock, across survey round

Percentage of outlets

Year:
- 2010
- 2011
- 2014

Facility Types:
- Public Health Facility
- Private-For-Profit-Facility
- Pharmacy
- ADDO
- DLDB
- General Retailer
What is the ‘green leaf’ logo?

- The ‘green leaf’ logo indicates that an ACT was subsidized by the Global Fund as a part of a private sector co-payment mechanism.

- From 2010-2011, the ‘green leaf’ logo subsidy program was known as AMFm and these ACTs were available in the public and private sector. Since 2012, the project is a private sector co-payment mechanism only.
Availability of QA ACT with ‘green leaf’ logo, public sector

Among all public health facilities with at least one antimalarial in stock, across survey round
Availability of QA ACT with ‘green leaf’ logo, all sectors
Among all health facilities with at least one antimalarial in stock, across survey round
Availability of non-QA ACTs in the public sector

Among all public facilities with at least one antimalarial in stock, across survey round.

- Public Health Facility

<table>
<thead>
<tr>
<th>Year</th>
<th>Percentage of outlets</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>10%</td>
</tr>
<tr>
<td>2011</td>
<td>10%</td>
</tr>
<tr>
<td>2014</td>
<td>10%</td>
</tr>
</tbody>
</table>
Availability of non-QA ACTs in all sectors

Among all facilities with at least one antimalarial in stock, across survey round

Percentage of outlets

2010

2011

2014

Public Health Facility
Private-For-Profit-Facility
Pharmacy
ADDO
DLDB
General Retailer
Types of non-QA ACT available in the private sector

- Most non-QA ACT found in the private sector were tablet formulations
- The most common brands include:
  - Artefan 80/480
  - Artequick
  - Artequin 300/375
  - Duo Cotecxin
Availability of SP, public health sector

Among all public health facilities with at least one antimalarial in stock, across survey round

![Bar chart showing availability of SP in public health facilities over time]
Availability of SP, all sectors

Among all health facilities with at least one antimalarial in stock, across survey round
Types of SP available in the private sector

- Almost 90% of the SP found in the private sector were tablet formulations
- Most were 2 or 3-tablet packs
- Remaining were suspensions
- 53% were manufactured in Tanzania
- 45% were manufactured in Kenya

![Pie chart showing the distribution of SP types]

- Malafin: 31%
- Orodar: 10%
- Sulphadar: 14%
- Ekelfin: 17%
- Laefin: 7%
- Other: 7%
What is the antimalarial market share between the public and private sectors?
Antimalarial Market Share, 2010-2014

Relative market volume (sale/distribution) of antimalarial AETDs, by sector and antimalarial class.
Antimalarial Market Share, 2010-2014

Relative market volume (sale/distribution) of antimalarial AETDs, by sector and antimalarial class

Percentage of total market volume

- QAACT without 'green leaf'
- Non-QAACT
- Other artemisinin therapy
- Non-oral artemisinin monotherapy
- QAACT with 'green leaf'
- SP
- Oral artemisinin monotherapy

2010
- Public: 50%
- Private: 10%

2011
- Public: 40%
- Private: 20%

2014
- Public: 30%
- Private: 70%
Antimalarial Market Share

Relative market volume (sale/distribution) of antimalarial AETDs, 2014

- Private
- Private-For-Profit Health Facility
- Pharmacy
- ADDO
- DLDB
- General Retailer

Percentage of total market volume
Antimalarial Market Share

Relative market volume (sale/distribution) of antimalarial AETDs, 2014

Percentage of total market volume

- QAACT without 'green leaf'
- QAACT with 'green leaf'
- Non-QAACT
- Oral artemisinin monotherapy
- Non-oral artemisinin monotherapy
- Other artemisinin therapy
- SP
How much do antimalarials cost in the private sector?
Private sector median price of AETD, 2010-2014

Among all drugs of this type available in the private sector, in 2010 US dollars

![Chart showing the median price of AETD in the private sector from 2010 to 2014. The chart indicates that the median price was highest in 2010 at $2.46, followed by $0.70 in 2011, $0.62 in 2012, $0.62 in 2013, and $0.94 in 2014. The chart also shows the prices for Quality-Assured ACTs and SP.]
Outlet Survey Results – Blood testing
Is malaria blood testing available where antimalarials are distributed?
Malaria Diagnostic Test Availability (RDT or Microscopy)
Among outlets stocking antimalarials, 2010-2014

- Public Health Facility
- Private-For-Profit-Facility
- Pharmacy
- ADDO
- DLDB
- General Retailer
Rapid Diagnostic Test Availability (RDT)
Among outlets stocking antimalarials, 2010-2014

Percentage of outlets

- Public Health Facility
- Private-For-Profit-Facility
- Pharmacy
- ADDO
- DLDB
- General Retailer

Year:
- 2010
- 2011
- 2014
Results – Knowledge
Do the providers working in outlets stocking antimalarials know the correct first-line treatment for uncomplicated malaria?
Antimalarial drug knowledge, 2010-2014

Providers who state the first-line dosing regimen for uncomplicated malaria for a two-year old child, among antimalarial stocking outlets, across survey round

Percentage of outlets

- Public Health Facility
- Private-For-Profit-Facility
- Pharmacy
- ADDO
- DLDB
- General Retailer
Urban/Rural Comparisons
Is the availability of QA ACTs different in urban and rural areas?
Availability of QA ACTs, urban/rural

Among all outlets with at least one antimalarial in stock, 2014

The graph shows the percentage of outlets offering antimalarials in urban and rural areas across different outlet types: Public Health Facility, ADDO, DLDB, and General Retailer. The bars indicate higher availability in urban areas compared to rural areas across all outlet types.
Availability of Non-QA ACTs, urban/rural

Among all outlets with at least one antimalarial in stock, 2014

- Public Health Facility
- ADDO
- DLDB
- General Retailer

Percentage of outlets

Urban Rural
Is the availability of SP different in urban and rural areas?
Availability of SP, urban/rural

Among all outlets with at least one antimalarial in stock, 2014

Percentage of outlets

Public Health Facility  ADDO  DLDB  General Retailer

Urban  Rural

[Graph showing availability of SP by outlet type and location]
Is the antimalarial market share different in urban and rural areas?
Antimalarial Market Share, urban/rural

Relative market volume (sale/distribution) of antimalarial AETDs, by sector and drug class, 2014

- **QAACT without 'green leaf'**
- **QAACT with 'green leaf'**
- **Non-QAACT**
- **SP**
- **Other artemisinin therapy**
- **Oral artemisinin monotherapy**
- **Non-oral artemisinin monotherapy**
Is the availability of malaria blood testing different in urban and rural areas?
Malaria Microscopy and RDT availability, urban/rural
Among public health facilities stocking antimalarials, 2014
Summary: National Trends
Summary of National Trends – 2014

1. Readiness of public health facilities to appropriately manage malaria cases:

- Nearly all public health facilities surveyed in 2014 had QA ACT in stock (98%)
- ‘Green leaf’ logo ACT availability declined from 55% of public health facilities in 2011 to 8% in 2014
- Most surveyed public health facilities had malaria blood testing available in 2014 (89%): 28% had microscopy, 76% had RDTs
- SP availability has declined from 64% in 2010 to 29% in 2014
- The public sector antimalarial market share has declined over time from 64% in 2010 to 29% in 2014
2. The role of the private sector in malaria case management:

✓ About 80% of all antimalarial-stocking outlets were in the private sector across each survey round.

✓ In 2014, around 80% of all private sector outlets had QA ACT available, with the exception of general retailers at 60%.

✓ In 2014, fewer than 20% of private outlets had Non-QA ACT available, with the exception of private-for-profit facilities (43%) and pharmacies (91%).

✓ The private sector antimalarial market share has increased over each survey round: 36% in 2010, 58% in 2011, 71% in 2014.

➢ In 2014, less than 11% of all private outlets had any malaria blood testing available, with the exception of private-for-profit facilities at 93%.
Summary of National Trends – 2014

3. The role of ADDOs in malaria case management:

- The market composition for ADDOs has increased from 7% in 2010 to 41% in 2014
- ADDOs contributed the largest market share of any outlet type at 41% of all antimalarial distribution
- QA ACT availability among ADDOs increased from 10% in 2010 to 87% in 2014
- Non-QA ACT availability among ADDOs decreased from 33% in 2010 to 17% in 2014
- Less than 10% of ADDOs had any blood testing available in any survey round
Summary of National Trends – 2014

4. Urban/rural comparisons:

- The private sector had a larger antimalarial market share in urban areas, at 84%. In rural areas, the market share was split evenly between sectors
- Non-QA ACT was more commonly found in urban than rural ADDOs, DLDBs, General retailers, and public health facilities
- Microscopy blood testing was found in 56% of urban public health facilities, compared to 13% of rural facilities.
- Data trends suggest higher RDT availability in rural public health facilities, ADDOs, DLDBs, and General retailers
Progress Against NMCP Strategic Plan
2014-2020
1. Provide universal access to quality diagnosis
   a) Achieve high diagnostic availability in both the public and private sectors
   b) Increase availability of RDTs in the public sector

2. Provide universal access to quality treatment
   a) Provide affordable QA ACT in the public and private sector
   b) Provide equitable access through community case management system (HMM through CHWs)
Availability of ORS & Zinc in public and private sectors

- Data collected among all screened outlets in 2014
- See multi-country report for results: www.actwatch.info
Acknowledgements

- Ministry of Health
- National Malaria Control Program
- PS Tanzania
- AMCA Inter-Consult Limited
- Fieldwork Team
- ACTwatch Team
Thank you!