ACTwatch produces standardized malaria medicine and diagnostic evidence across 13 countries
Context for ACTwatch Outlet Surveys in Uganda

Co-paid ACTs – Global Fund

VHT ICCM scale up

AL and RDT scale up strategies

2010  2011  2012  2013  2014  2015

Co-­‐paid	
  ACTs	
  –	
  Global	
  Fund

AMFm

New Funding Model
Outlet Survey Study Population

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

**What is an outlet?**

- Public health facility
- Private not-for-profit (mission) health facility
- VHT
- Private for-profit health facility
- Pharmacy
- Drug shop
- General retailer

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Sampling

Representative sample of clusters (sub-counties) from urban & rural areas

Complete a census of all potentially eligible outlets

Extend the census area to county for public health facilities and district for pharmacies

Screen for antimalarials in stock or malaria blood testing available

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## Districts Included in the Sample

<table>
<thead>
<tr>
<th>Northern / W. Nile</th>
<th>Eastern</th>
<th>Western / S. West</th>
<th>Central</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amuru</td>
<td>Bukedea</td>
<td>Hoima</td>
<td>Bukomansimbi</td>
</tr>
<tr>
<td>Apac</td>
<td>Butaleja</td>
<td>Kabale</td>
<td>Gomba</td>
</tr>
<tr>
<td>Arua</td>
<td>Kaliro</td>
<td>Kamwenge</td>
<td>Kampala</td>
</tr>
<tr>
<td>Gulu</td>
<td>Kamuli</td>
<td>Kanungu</td>
<td>Kyankwanzi</td>
</tr>
<tr>
<td>Kole</td>
<td>Mayuge</td>
<td>Kasese</td>
<td>Lyantonde</td>
</tr>
<tr>
<td>Lamwo</td>
<td>Mbale</td>
<td>Kibaale</td>
<td>Masaka</td>
</tr>
<tr>
<td>Lira</td>
<td>Ngora</td>
<td>Kiryandongo</td>
<td>Ssembabule</td>
</tr>
<tr>
<td>Oyam</td>
<td>Pallisa</td>
<td>Kyegegwa</td>
<td>Wakiso</td>
</tr>
<tr>
<td></td>
<td>Sironko</td>
<td>Kyenjojo</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Soroti</td>
<td>Masindi</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tororo</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Kotido</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
2013 Outlet Survey Sample

- 8,264 outlets enumerated
- 332 outlets not screened
- 7,932 outlets screened
- 4,428 outlets did not meet screening criteria
- 3,504 outlets met the screening criteria
- 25 outlets not interviewed
- 3,479 outlets interviewed
Availability of Any Antimalarial

Among all screened outlets (N=7,932 screened)

![Chart showing availability of antimalarials across different outlet types and years (2010, 2011, 2013).]

- Public Health Facility
- Private Not-for-Profit Facility
- Pharmacy
- General Retailer
- CHW (VHT)
- Private for-Profit Health Facility
- Drug Store
- Itinerant Drug Vendor

www.actwatch.info
Antimalarial and RDT Audits

Record information about each 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
- Presence of co-payment logo

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Quality-Assured ACTs (QAACT):

- Comply with the Global Fund Quality-Assurance Policy.
- Appeared on the Global Fund’s indicative list of antimalarials meeting the quality-assurance policy during data collection.
- Classified in ACTwatch studies according to drug information captured during the audit:
  - Brand name
  - Active ingredients & strengths
  - Manufacturer
  - Country of manufacture
  - Package size

www.actwatch.info
Outlets that Stock Antimalarials

www.actwatch.info
Market Composition

*Outlet type, among outlets stocking any antimalarial*

<table>
<thead>
<tr>
<th>Year</th>
<th>N</th>
<th>Public Health Facility</th>
<th>Private Not-for-Profit Health facility</th>
<th>Pharmacy</th>
<th>General Retailer</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>1,434</td>
<td>59%</td>
<td>21%</td>
<td>4%</td>
<td>10%</td>
</tr>
<tr>
<td>2011</td>
<td>2,252</td>
<td>54%</td>
<td>23%</td>
<td>9%</td>
<td>8%</td>
</tr>
<tr>
<td>2013</td>
<td>2,339</td>
<td>43%</td>
<td>36%</td>
<td>12%</td>
<td>6%</td>
</tr>
</tbody>
</table>

www.actwatch.info
Readiness for Malaria Case Management

Ability to Test & Treat

Among antimalarial-stocking outlets
Availability of Malaria Blood Testing (RDT or Microscopy)

Among outlets stocking antimalarials

<table>
<thead>
<tr>
<th>Year</th>
<th>Public Health Facility</th>
<th>CHW</th>
<th>Private Not-for-Profit Facility</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2013</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

www.actwatch.info
Availability of Malaria Blood Testing (RDT or Microscopy) Among outlets stocking antimalarials

Percentage of outlets

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

2010

2011

2013

www.actwatch.info
Availability of Malaria Blood Testing (RDT or Microscopy) Among outlets stocking antimalarials

www.actwatch.info
Availability of Quality-Assured ACT Among outlets stocking antimalarials

<table>
<thead>
<tr>
<th>Year</th>
<th>Public Health Facility</th>
<th>Private Not-for-Profit Facility</th>
<th>CHW</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>90%</td>
<td>40%</td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td>95%</td>
<td>55%</td>
<td></td>
</tr>
<tr>
<td>2013</td>
<td>100%</td>
<td>60%</td>
<td></td>
</tr>
</tbody>
</table>

www.actwatch.info
Availability of Quality-Assured ACT
Among outlets stocking antimalarials

2010
2011
2013

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

Percentage of outlets

www.actwatch.info
Availability of Quality-Assured ACT
Among outlets stocking antimalarials

Percentage of outlets

2010  2011  2013

Public Health Facility
Private Not-for-Profit Facility
Pharmacy
CHW
Private for-Profit Health Facility
Drug Store

www.actwatch.info
Correct Knowledge: First-Line Treatment

Among outlets stocking antimalarials

Percentage of outlets

- Public Health Facility
- Private Not-for-Profit Facility
- Private for-Profit Health Facility
- Pharmacy
- CHW
- Drug Store
Antimalarial Outlet Performance
Antimalarial Market Share

Relative volumes sold/distributed

<table>
<thead>
<tr>
<th>Year</th>
<th>Public</th>
<th>Private</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
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www.actwatch.info
Antimalarial Market Share

Relative volumes sold/distributed

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<tr>
<td>2013</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **QAQACT without green leaf**
- **Non-QA ACT**
- **Other non-artemisinin therapy**
- **Non-oral artemisinin monotherapy**
- **SP**
- **Oral artemisinin monotherapy**

www.actwatch.info
Antimalarial Market Share

Relative volumes sold/distributed

<table>
<thead>
<tr>
<th>Year</th>
<th>Public</th>
<th>Private</th>
<th>Public</th>
<th>Private</th>
<th>Public</th>
<th>Private</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td></td>
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<tr>
<td>2011</td>
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</table>

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

www.actwatch.info
Private Sector Price
Median Private Sector Antimalarial Price, 2010 USD

1 Adult Equivalent Treatment Dose, tablet formulation

2010 USD

2010 | 2011 | 2013

SP | Quality-Assured ACT | Non-Quality Assured ACT

2010

$0.70 | $2.79 | $3.71

2011

$0.59 | $1.96 | $3.91

2013

$0.49 | $1.96 | $3.92

www.actwatch.info
Median Private Sector Antimalarial Price, 2013 USD

1 Adult Equivalent Treatment Dose, tablet formulation, or Pre-Packaged Child (2 Years) Dose

- **SP AETD**: $0.59
- **QA AETD**: $2.35
- **Pre-packaged pediatric QA AL**: $0.59

www.actwatch.info
Median Private Sector Antimalarial Price, 2013 USD

1 Adult Equivalent Treatment Dose, tablet formulation, or Pre-Packaged Child (2 Years) Dose

<table>
<thead>
<tr>
<th>Drug Store</th>
<th>Pharmacy</th>
<th>Private for-Profit Health Facility</th>
<th>All Private</th>
</tr>
</thead>
<tbody>
<tr>
<td>SP AETD</td>
<td>$0.59</td>
<td>$0.78</td>
<td>$0.59</td>
</tr>
<tr>
<td>QA AETD</td>
<td>$1.96</td>
<td>$1.57</td>
<td>$2.74</td>
</tr>
<tr>
<td>Pre-packaged pediatric QA AL</td>
<td>$0.47</td>
<td>$0.59</td>
<td>$0.78</td>
</tr>
</tbody>
</table>

www.actwatch.info
Median Private Sector RDT Price, 2013 USD

Including consultation/service fees, adult & child

2013 USD

RDT - Adult

$1.17

RDT - Child

$1.17

All Private
Median Private Sector RDT Price, 2013 USD

*Including consultation/service fees, adult & child*
Summary of National Trends

1. Recent success has been achieved in improving public & private sector outlet readiness to test & treat malaria
   - High availability of quality-assured ACT
   - High provider knowledge of the first-line treatment
   - Moderate availability of malaria blood testing
     • Gaps, particularly in the private sector
     • Availability remains very low among drug shops
Summary of National Trends

2. Strong quality-assured ACT market share
   - Over 40% of antimalarials distributed through the public sector
     - Medicines distributed through the public sector are largely QA ACT, and some SP
     - Most QA ACT distributed through the public sector is not ‘green leaf’ (co-paid) ACT
   - Over 60% of antimalarials distributed through the private sector
     - QA ACT market share is improving, however still large volumes of SP, quinine, and non-QA ACT being distributed in the private sector
     - Most QA ACT distributed in the private sector is ‘green leaf’ (co-paid) ACT
Summary of National Trends

3. Private Sector Price...
   - Of 1 QA ACT AETD is 4 times higher than 1 SP AETD
     • This may be a barrier to stronger QA ACT relative market share
   - For a malaria RDT is $1.17 USD
     • Compared to $0.59 for pre-packaged QA AL for a two-year old child
     • Compared to $2.35 for 1 QA ACT AETD
Urban / Rural Comparisons
Market Composition

Outlet type, among outlet stocking any antimalarial

Urban
N=763

- Public Health Facility: 44%
- Private Not-for-Profit Facility: 7%
- Pharmacy: 7%
- General Retailer: 1%

Rural
N=1,576

- CHW (VHT): 43%
- Private for-Profit Facility: 6%
- Drug Store: 7%
- Itinerant Drug Vendor: 1%

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Availability of Malaria Blood Testing, RDT or Microscopy
Among outlets stocking antimalarials

Percentage of outlets

Public Health Facility
Private for-Profit Health Facility
Pharmacy
Drug Store

Urban
Rural

www.actwatch.info
Availability of Quality-Assured ACT
Among outlets stocking antimalarials

![Graph showing availability of ACT in different types of outlets (Public Health Facility, Private for-Profit Health Facility, Pharmacy, Drug Store) across urban and rural areas.](www.actwatch.info)
Antimalarial Market Share

Relative volumes sold/distributed

<table>
<thead>
<tr>
<th>Percentage of sector market volume</th>
<th>Public</th>
<th>Private</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban</td>
<td></td>
<td></td>
</tr>
<tr>
<td>QAACT without 'green leaf'</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-QA ACT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other non-artemisinin therapy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-oral artemisinin monotherapy</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Urban                             |        |         |
| QAACT with 'green leaf'           |        |         |
| SP                                |        |         |
| Oral artemisinin monotherapy      |        |         |

| Rural                             |        |         |
| QAACT with 'green leaf'           |        |         |
| SP                                |        |         |
| Oral artemisinin monotherapy      |        |         |

www.actwatch.info
Median Private Sector Antimalarial Price, 2013 USD

1 Adult Equivalent Treatment Dose, tablet formulation, or Pre-Packaged Child (2 Years) Dose
Summary of Urban/Rural Comparisons

1. The relative roles of public and private sector outlets are different in urban versus urban areas
   - Private sector outlets account for more of the antimalarial market composition and distribute most of the antimalarials in urban areas
Summary of Urban/Rural Comparisons

2. Readiness for appropriate malaria case management is similar in urban and rural areas
   - Availability of QA ACT and malaria blood testing is similar across urban and rural areas
     • However drug shops in rural areas have lower QA ACT availability as compared with drug shops in urban areas
Summary of Urban/Rural Comparisons

3. Antimalarial market performance is slightly better in rural areas as compared with urban areas
   - While nearly 60% of antimalarials distributed in rural areas were QA ACT, fewer than half of antimalarials distributed in urban areas were QA ACT.
   - Private sector price of antimalarials tended to be more affordable in rural areas
Thank You

- Ministry of Health
- National Malaria Control Program
- Makerere University Department of Social Work & Social Administration
- Fieldwork team
- PACE
- ACTwatch team

Please visit [www.actwatch.info](http://www.actwatch.info)

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Dr. Megan Littrell, ACTwatch  
mlittrell@psi.org
Antimalarial Market Share, Uganda 2013

Relative volumes sold/distributed

Percentage of total market volume

- Public
- Private
- Private for-Profit Health Facility
- Pharmacy
- Drug Store

- QAACT without the 'green leaf' logo
- Non-QA ACT
- Other non-artemisinin therapy
- Non-oral artemisinin monotherapy
- QAACT with the 'green leaf' logo
- SP
- Oral artemisinin monotherapy

www.actwatch.info
Median Private Sector Antimalarial Price, 2010 USD

1 Adult Equivalent Treatment Dose, tablet formulation

<table>
<thead>
<tr>
<th>Year</th>
<th>QAACT Without 'green leaf' logo</th>
<th>QAACT With 'green leaf' logo</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>$2.79</td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td>$1.96</td>
<td>$1.96</td>
</tr>
<tr>
<td>2013</td>
<td>$1.96</td>
<td>$1.96</td>
</tr>
</tbody>
</table>

www.actwatch.info
Availability of Malaria RDTs
Among outlets stocking antimalarials
Availability of Malaria Microscopy
Among outlets stock antimalarials

Public Health Facility
Private Not-for-Profit Facility
Private for-Profit Health Facility
Pharmacy
CHW
Drug Store

Percentage of outlets

2010 2011 2013