Artemisinin Monotherapy Replacement Project: 2012-2015

PSI Myanmar

26 May 2016
Table of contents

- Antimalarial Landscape in Myanmar in 2012
- AMTR Project Background
- Methodology: ACTwatch Background
- Outlet Survey Findings
- Context for the Findings
- Conclusions
2012

the antimalarial landscape in Myanmar
60 percent that seek treatment in the private sector
Widespread use of partial oAMT courses

- Private sector imported ~1.2m monotherapy courses annually.
- A single private distributor dominated the market with >70% of the market share with a highly centralized supply chain.
- Patients typically paid ~$0.50 per treatment.
The five elements of the artemisinin monotherapy replacement program
1. **Policy & Regulation**
   Advocacy to FDA & NMCP to ban oAMT importation/registration.

2. **Supply Chain**
   Distribution of highly subsidized quality assured ACT
   Use of the existing private sector supply chains

3. **Patient Behavior Change**
   Mass media to increase recognition & trust in the lotus leaf quality seal

4. **Provider Behavior change**
   Change private providers’ behaviours in the Eastern Border

5. **Monitor & Evaluate**
   Annual Outlet, Household survey & Mystery Client survey
AMTR: Program Reach

Behaviour change

Subsidized ACT sales

119 Townships

- ~ 20,000 Outlets

280 Townships

- ~ 3,400 Outlets

- Distributed ~ 1.8 million QA-ACT since project started in 2012
- RDT – distributed > 130,000 since Sept 2015
- PSI trained about 5,600 outlets on RDT testing (4,100 outlets reported)
ACTwatch produces standardized malaria medicine and diagnostic evidence across 13 countries
Implemented in 13 countries

Between 2009 to 2014:

- 40 outlet surveys
- Over 170,000 outlets screened
- 270,000 antimalarials audited
ACTwatch methods and data were used for the Independent Evaluation of the AMFm (Affordable Medicines Facility, malaria) administered by the Global Fund.
Study countries

ACTwatch is conducting surveys on the demand and supply sides of the market in a variety of settings, in order to gather critical information on levels and trends in the availability, price and market share of antimalarials and rapid diagnostic tests, as well as providers’ perception and knowledge of antimalarial medicines across the public and private sectors, including informal outlets.

As of 2013, surveys are conducted in ten malaria-endemic countries - eight in sub-Saharan Africa and two in Southeast Asia, which represent a wide variety of settings.

Click on a country below to find country profiles and study results.
Evidence of successful malaria case management policy impl in Cambodia: results from nati outlet surveys

ACTWatch Group1, Joe Novotny1, Amandeep Singh1, Lek Dysoleu1

Abstract
Background: For over a decade, Cambodia has implemented a number increase access to quality malaria case management services and address paper utilizes outlet survey trend data collected by the ACTWatch project policy and strategies have led to shifts in anti-malarial markets.

Methods: Anti-malarial ACTWatch outlet surveys were conducted in Car August and 2013 September-October. A census of all outlets with the g was conducted within a nationally representative sample of communes. Previous, week, and retail price were collected for each anti-malarial stock blood testing was also collected.

Results: A total of 7833 outlets were enumerated in 2004, 18,584 in 2011 of public health facilities with at least one anti-malarial in stock on the dig (54.8%) and 2011 (60%) and remained high in 2013 (62.9%). Similar trend (VWM). Overall, private sector availability of anti-malarials decreased over time and anti-malarial stock public health facilities (81.5%), VWM (95.4%), private pharmacies (71.9%) had the countries first-line artemisinin-based combination 2012, 60% of anti-malarials were delivered through the private sector. 40 common anti-malarial to be sold or distributed was the first-line ACT, with oral artemisinin monotherapy, which had accounted for 6% of total anti-malarial sold/distributed in 2013. Malaria blood testing availability remains and VWM, with availability over 90% in 2011 and 2013. Moderate availability

Conclusions: Continued implementation of successful public and private malaria drug treatment policies will be important to protect the efficacy of the malaria elimination in Cambodia by 2025.

Keywords: Anti-malarial, Treatment, Elimination, Outlet, Availability, Mark

Oral artemisinin monotherapy removal from the private sector in Eastern Myanmar between 2012 and 2014

Hnin Su Su Khin1, Tin Aung1, Aung Thi2, Chit White3 and ACTWatch Group

Abstract
Background: In 2012 the Artemisinin Monotherapy Therapy Replacement (AMTR) project was implemented in Eastern Myanmar to increase access to subsidized, quality-assured artemisinin combination therapy (ACT) and to remove oral artemisinin monotherapy (AMT) from the private sector. The aim of this paper is to examine changes over time in the private sector anti-malarial landscape and to illustrate the value of complementary interventions in the context of a national ACT subsidy.

Methods: Three rounds of cross-sectional malaria medicine outlet surveys were conducted, in 2012, 2013 and 2014. Project intervention areas were selected in the Myanmar Artemisinin Resistance Containment (MARC) area. Provider detailing was implemented in these selected areas. Comparison areas were selected outside of this catchment area, from townships in close proximity to the MARC framework. Within each domain, multi-staged sampling was used to select areas for the survey. Outlets with the potential to sell or distribute anti-malarials in the private sector were screened for eligibility.

Results: The total number of outlets approached for an interview was as follows in the intervention and comparison areas, respectively: 2012 N = 2046 and 1612; 2013 N = 1636 and 1884; 2014, N = 2939 and 2941. The percentage of pharmacies of pharmacies general retailers and mobile providers (dressed as priority outlets) with oral AMT in stock on the day of the survey decreased over time in the intervention areas (2012 = 68% vs. 2013 = 48%; 2014 = 10%). Conversely, quality-assured ACT availability increased among these outlets (2012 = 4% vs. 2013 = 62%; 2014 = 79%). Relative oral AMT market share among priority outlets also decreased over time (2012 = 44% vs. 2013 = 18% vs. 2014 = 14%), while market share of oral AMT reported at increased (2012 = 3% vs. 2013 = 50% vs. 2014 = 51%). Among priority outlets in the comparison area, similar trends were observed, though changes over time were less substantial compared to the intervention area. Other outlet types (community health workers and health facilities) performed relatively well over time though modest improvements were also observed.

Conclusion: The findings point to the successful design and implementation of a strategy to rapidly remove oral AMT from pharmacies, general retailers and mobile providers and to replace it with quality-assured ACT. The evidence also highlights the importance of supporting interventions in the context of a high-level subsidy.

Keywords: Anti-malarial drug resistance, Malaria elimination, Outlet survey, Oral artemisinin monotherapy, Artemisinin combination therapy, Subsidy
Indicator Contributions Regional Scorecards

ACTwatch outlet surveys conducted in 2015 in the GMS will contribute key indicators to regional scorecards:

- WHO Emergency Response to Artemisinin Resistance (ERAR)
- Asian Pacific Leaders Malaria Alliance (APLMA) Access to Quality Medicines and other Technologies Task Force (AQMTF)
Context for ACTwatch Outlet Surveys in Myanmar

Subsidised ACTs –

ACT scale up strategies

ACTwatch Project

- Survey dates:
  - AMTR domains: Aug-Oct 2015,
  - West domains: Oct 2015 to Jan 2016
- Number of townships: 79
- Number of clusters: 779
- Total outlets screened: 28659
- Total AM outlets interviewed: 4245
- Total products audited: 10,018
- Oral AMT products audited: 1,302
the three

priority outlets targeted by product promoters
General Retailers
Mobile Providers
Got ACT?

2012-2015

types of antimalarials availability in outlets
What antimalarials were available in outlets?

Quality Assured ACT

Oral Artemisinin Monotherapy

- Percentage of outlets
  - 2012
  - 2013
  - 2014
  - 2015

Target Outlets

- Intervention
- Comparison

- Oral Artemisinin Monotherapy
  - Intervention
  - Comparison
  - 2012
What antimalarials were available in outlets?

Quality Assured ACT

Oral Artemisinin Monotherapy

<table>
<thead>
<tr>
<th>Target Outlets</th>
<th>Intervention</th>
<th>Comparison</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2013</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Target Outlets</th>
<th>Intervention</th>
<th>Comparison</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2013</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
What antimalarials were available in outlets?

Quality Assured ACT

Oral Artemisinin Monotherapy
What antimalarials were available in outlets?

Quality Assured ACT

Oral Artemisinin Monotherapy
What antimalarials were available in outlets?

Quality Assured ACT
What antimalarials were available in outlets?

Oral Artemisinin Monotherapy

<table>
<thead>
<tr>
<th>Target Outlets</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intervention</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comparison</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

What antimalarials were available in outlets?
non-priority outlets

health facilities & community health workers
What antimalarials were available in outlets?

70

Percent of non-target outlets stocking quality assured ACT in 2015
What antimalarials were available in outlets?

20 Percent of non-target outlets stocking oral AMT in 2012
What antimalarials were available in outlets?

5

Percent of non-target outlets stocking oral AMT in 2015
Market Share

2012-2015

types of antimalarials sold or distributed in the previous week
How did the market share change over 4 years?
How did the market share change over 4 years?

![Market Share Chart]

- QA ACT with logo
- QA ACT without logo
- Non-QA ACT
- Non-artemisinin therapy
- Oral AMT
- Non-Oral AMT
How did the market share change over 4 years?
How did the market share change over 4 years?
How did the market share change over 4 years?
How did the market share change over 4 years?

<table>
<thead>
<tr>
<th>Year</th>
<th>QA ACT with logo</th>
<th>QA ACT without logo</th>
<th>Non-QA ACT</th>
<th>Non-artemisinin therapy</th>
<th>Oral AMT</th>
<th>Non-Oral AMT</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2013</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2014</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Market Share: Eastern Myanmar 2015
Price

was the price subsidy passed on to the patient?
80 Percent of outlets distributing quality assured ACT for less than 500 Kyat in 2015
The five insights from national data regarding oral AMT in Myanmar
Oral AMT is a common antimalarial

8,500
number of antimalarials audited in 2015

1,000
number of audited antimalarials that were oral AMT
Oral AMT is found throughout Myanmar

80 percent of townships with at least one outlet stocking oral AMT
Oral AMT is commonly manufactured outside the country

Vietnam & China

Most common manufacturers or oral AMT
4) Oral AMT is as affordable as quality assured ACT

2-3
number of oral AMT tablets
typically sold to patients
in 2015

500 *Kyat*
price sold to patients
Oral AMT is unlikely to be expired

2016, 2018

Expiry dates found on most of the packaging
policy & regulation
of oral artemisinin monotherapy
The year oral AMT was banned in Myanmar

While Myanmar has taken regulator measures to halt the use of oral artemisinin monotherapy, the manufacturing and marketing of these products is still on-going. Persistent sale and distribution of oral artemisinin monotherapy may be explained by the fact that the importation of licensed oral AMT (products that received a five-year license prior to the implementation of the ban) is still permitted as a means to honor existing agreements with companies and manufacturers of this drug.

Khin, H; Aung, T; Aung, Thi et al., Malaria Journal, 2016, Malaria Journal
conclusion
Substantial increases in the availability and market share of quality assured ACT is observed over time in priority outlets.

Antimalarial market improvements are greater in the intervention area, reflecting the importance of supportive interventions.

Non-priority outlets performed well over time.

Between 2014 and 2015 rises in oral artemisinin monotherapy are observed, reflecting declines in quality assured ACT.

The price of quality assured ACT is the same as partial doses of oral AMT. Oral AMT has a longer shelf life than quality assured ACT. There may be a provider incentive to stock and sell oral AMT.

Enforcement regarding the ban on oral AMT is urgently needed to ensure an enabling environment. It will otherwise be challenging if not impossible to remove this medicine from the market.
thank you
connect with us

VISIT US
psi.org

SEE OUR IMPACT
psiimpact.com

LIKE US
facebook.com/PSIHealthyLives

FOLLOW US
@PSIimpact

FOLLOW US
@PSIimpact

FOLLOW US
linkedin.com/company/population-services-international