What determines the sale of oral artemisinin monotherapy among private sector providers in Myanmar?

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Background
Myanmar Context & Rationale

- More malaria than any other country in GMS (70% of total).
- Commitment to eliminate malaria by 2030.
- Oral artemisinin monotherapy (AMT) was banned since 2012.
- Yet, sale and use of oral AMT is still common.
Objective:
To describe the market landscape of oral AMT, and
To describe factors that may influence sale & distribution.
Methods
Study Sites & Sampling

- Nationally representative ACTwatch outlet survey
  - (Oct 2015-Jan 2016)

- Domain Stratification:
  - Bangladesh Border
  - Eastern Myanmar
  - India Border
  - Central Myanmar

- Census of all potential private sector outlets

- Screen for antimalarial in stock or malaria blood testing
  - Audit of all antimalarials
Survey Population

- **Study population**
  - Outlets with antimalarials or
  - Malaria blood testing

- **What’s a private outlet?**
  - Private for-Profit
    - Health facility
  - Pharmacy
  - General Retailer
  - Mobile vendor/Itinerant
    - Drug Vendor
Results
Outlet Sample:

3,859 number of outlets with an antimalarial in stock on the day of survey
Antimalarial Product sample: 
8,500 number of antimalarials audited
Oral AMT Product Sample:
1,036 number of oral AMT products audited
Where was oral AMT found?

- 500 clusters out of 801 had at least one outlet stocking oral AMT.
What is oral AMT availability by domain?

- National: N=3,589
- Eastern: N=1,330
- Central: N=594
- Bangladesh Border: N=1,065
- India Border: N=870
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What is oral AMT availability **by domain**?

- **National**: N=3,589
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- **Bangladesh Border**: N=1,065
- **India Border**: N=870

Percent of antimalarial stocking outlets
What is the private sector **market share** of oral AMT by **domain**?

**Market Share**

- **Eastern**
  - Oral AMT: 30%
  - Non-Oral AMT: 5%
  - Other Non-artemisinin: 35%
  - Chloroquine: 5%
  - Any ACT: 20%

- **Central**
  - Oral AMT: 35%
  - Non-Oral AMT: 5%
  - Other Non-artemisinin: 30%
  - Chloroquine: 5%
  - Any ACT: 15%

- **Bangladesh Border**
  - Oral AMT: 30%
  - Non-Oral AMT: 20%
  - Other Non-artemisinin: 25%
  - Chloroquine: 20%
  - Any ACT: 5%

- **India Border**
  - Oral AMT: 40%
  - Non-Oral AMT: 5%
  - Other Non-artemisinin: 25%
  - Chloroquine: 20%
  - Any ACT: 10%
What is the private sector **market share** of oral AMT by **domain**?

Oral AMT market share might even be an underestimate.
What is the private sector **market share** of oral AMT by **outlet type**?

- **Health Facility**
- **Pharmacy**
- **General Retailer**
- **Itinerant Drug Vendor**

- **Oral AMT**
- **Non-Oral AMT**
- **Other Non-artemisinin**
- **Chloroquine**
- **Any ACT**
What is the private sector **market share** of oral AMT by **outlet type**?

<table>
<thead>
<tr>
<th>Outlet Type</th>
<th>Market Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health Facility</td>
<td>100%</td>
</tr>
<tr>
<td>Pharmacy</td>
<td>60%</td>
</tr>
<tr>
<td>General Retailer</td>
<td>60%</td>
</tr>
<tr>
<td>Itinerant Drug Vendor</td>
<td>60%</td>
</tr>
</tbody>
</table>

- **Oral AMT**
- **Non-Oral AMT**
- **Other Non-artemisinin**
- **Chloroquine**
- **Any ACT**
What is the private sector market share of oral AMT?
What is market share of AMT products?

- **Private Sector**
  - Oral AMT
  - Non-Oral AMT
  - Other Non-artemisinin
  - Chloroquine

- **Oral AMT**
  - Artesunate, Mediplantex
  - Unknown product info/Artesunate brands/
  - Other artesunate brands/
  - Aresunate, Central Pharma

The chart shows the market share distribution among different categories of AMT products.
oral AMT manufactures;
Additional insights on oral AMT

- Distribution of less than a full-course was common:
  - median adult dose = 2 tablets
  - median price of $0.16/tablet

- Low stock levels; frequent restocking of low volume wholesale purchases, higher profit margins

- Consumer demand is real

- Unlikely to be expired soon

Expiration dates of oral AMT products:
- Expired 13%
- Less than 1 year 22%
- 1-2 years 9%
- Greater than 2 years 56%
Profiling the provider

1) Works as a general retailer or pharmacist

2) Keeps low stock of oral AMT, but frequently restocks

3) Commonly purchases Mediplantex

4) Sells oral AMT as a few tablets, for around 32 cents
Conclusion
What does the ACTwatch data tell us?

- Urgent need to address availability of oral AMT in Myanmar.

- Oral AMT is widespread:
  - Availability and distribution are common in the India border region

- Policy and regulation regarding oral AMT sale, importation, and registration must be strengthened

- Strategies must also address manufacturing and production outside of the country
Thankyou