ACTwatch Expansion in the Greater Mekong Sub-Region
In 2015, the ACTwatch project expanded its presence in the Greater Mekong Sub-Region to address the critical and immediate need for antimalarial market evidence to inform and monitor malaria elimination efforts in the region.
EXPANDING ACTWATCH

The emergence of malaria parasites resistant to artemisinin in the Greater Mekong Sub-Region (GMS) is a serious threat to the recent gains and current ambitions for eliminating *Plasmodium falciparum* in the region.

With funding from the Bill and Melinda Gates Foundation, ACTwatch will conduct its fourth outlet survey in Cambodia (2009, 2011, 2013 now 2015) and expand the fourth sub-national outlet survey in Myanmar (2012, 2013, 2014 now 2015) to a nation-wide assessment. For the first time outlet surveys will be conducted in Laos, Thailand and Vietnam providing a snapshot of the antimalarials available in these markets.

A new supply chain survey component is also being implemented in all the countries to address undocumented distribution channels of oral artemisinin monotherapy. This new information will be important for monitoring and informing strategies to ensure that antimalarial markets are operating in line with national policies, guidelines, and regulations, given the ban on the importation or distribution of oral artemisinin monotherapy across most of the GMS.

THE EXPANSION OF ACTWATCH IN THE GMS AIMS TO:

• Generate relevant, timely and high quality antimalarial market evidence;

• Disseminate the evidence at national, regional, and international levels, reaching policy-makers, donors and programmers in a timely manner;

• Provide evidence for the design of policies and strategies to effectively engage the private sector;

• Investigate where oral artemisinin monotherapy is still available and provide actionable evidence to shut down supply chains of this banned class of antimalarial medicine.
PROJECT INSIGHTS

ACTwatch will continue to provide insights into the availability of oral artemisinin monotherapy.

ACTwatch methods will be used to monitor displacement of oral artemisinin monotherapies, a major objective of the resistance containment strategy. ACTwatch data will feed into regional score cards such as the Asia Pacific Leaders Malaria Alliance Access to Quality Medicines Task Force and the World Health Organization (WHO) Emergency Response to Artemisinin Resistance (ERAR), which are vested in supporting national programs in tracking progress towards halting the availability and use of oral artemisinin monotherapies.

In countries such as Cambodia where ACTwatch has implemented three rounds of outlet surveys, trend data collected in 2009, 2011 and 2013 show the decline in availability of oral artemisinin monotherapy (AMT). This is largely attributed to the government ban on distribution of oral artemisinin monotherapy in 2009 which was enforced through multiple strategies.

No oral AMT was found in public health facilities across survey rounds.

In 2009, almost 40 percent of antimalarial stocking pharmacies, close to 30 percent of drug stores and just over one in four general retailers were stocking oral AMT.

By 2013, oral AMT availability was zero, with the exception of antimalarial stocking mobile providers.

Trends in availability of oral artemisinin monotherapy, Cambodia
WHAT RESEARCH METHODS ARE BEING USED?

A number of studies are being implemented across the GMS including:

- An outlet survey across the public sector and the private sector to investigate the availability, price, and market share of antimalarials and malaria diagnostic testing services.

- A rapid supply chain survey to document components of the distribution chain for oral artemisinin monotherapy.

- In-depth interviews with national key informants to understand the malaria burden, policy, and strategy context.

- In the private sector in Cambodia, exit interviews and observations to address fever case management practices and quality of care.

THE GMS OUTLET SURVEY AND SUPPLY CHAIN STUDIES WILL ADDRESS A NUMBER OF KEY QUESTIONS:

- What types of outlets are distributing antimalarials and providing malaria blood testing?

- What types of antimalarials and rapid diagnostic tests are available and distributed by public and private sector?

- What proportion of public and private sector antimalarial medicine outlets provide 1) national first-line malaria medicines; 2) non-first-line medicines; and 3) malaria blood testing?

- What is the antimalarial market share of national first-line medicines relative to the market share for other types of antimalarials?

- What is the consumer price for antimalarial medicines and malaria blood testing among private sector outlets?

- What is the distribution chain for oral artemisinin monotherapy?
A SNAPSHOT OF THE SURVEY METHODS & RESEARCH QUESTIONS

THE OUTLET SURVEY

1. A census of all outlets with the potential to sell or distribute medicines.

2. Outlets are screened for eligibility (outlets that are stocking [or previously stocked] antimalarials or malaria diagnostic testing).

3. A product audit of all antimalarials and malaria tests that are available in the outlets is conducted.

4. Other questions are administered to the main provider addressing knowledge and other malaria case management practices, as well as stock-outs.

5. If any oral AMT is found to be in stock or previously stocked, a separate questionnaire module is administered. Information is obtained on the supplier.

THE SUPPLY CHAIN STUDY

6. A separate supplier interview, using a similar questionnaire is conducted.
WHERE ARE STUDIES BEING IMPLEMENTED?

The ACTwatch research areas align with the GMS regional priorities for antimalarial market monitoring.

**MYANMAR**

Private sector estimates will be provided for four study areas, including central and eastern Myanmar, the western border with India, and coastal border/Rakhine state. Sub-national outlet surveys have already been conducted in 2011, 2012 and 2013 in central and eastern Myanmar as part of the Artemisinin Monotherapy Replacement Project study.

**THAILAND**

Selected areas will provide evidence for both the Thai-Myanmar and Thai-Cambodia border areas.

**CAMBODIA**

Selected areas are in line with the 2014 WHO 2-tier stratification system for addressing drug resistance. ACTwatch areas are selected from either Tier 1 (areas prioritized for immediate response to contain resistance or eliminate malaria) or Tier 2 (areas targeted for intensified malaria control to reduce transmission and/or limit the risk of emergence or spread of resistant parasites). ACTwatch evidence will be presented for Tier 1 and Tier 2 areas (domains).

**LAOS**

Selected areas are from high burden southern provinces bordering Thailand, Cambodia, and Vietnam, where evidence of artemisinin resistance was detected in 2013. Evidence will be provided for this key border area.

**VIETNAM**

Selected areas include the central highlands and borders with Laos and Cambodia with relatively high malaria burden and risk for antimalarial drug resistance. The Vietnam study will focus on understanding malaria markets in border areas versus non-border areas given the nature of increased malaria risk and antimalarial drug resistance associated with the cross-border areas and mobile and migrant populations. Evidence will be provided for two areas, both non-border areas and border areas.
WHAT ARE THE SAMPLING METHODS?

HOW ARE AREAS SELECTED?
Prior to commencing field work for the outlet surveys, administrative areas, typically with a population size of 10,000-15,000 are identified in each country. A random sample of these areas is selected using national sampling frames. Administrative boundaries provide areas for which an outlet census is conducted.

WHAT ADDITIONAL PRIVATE SECTOR SAMPLING APPROACHES ARE USED IN LAOS, THAILAND AND VIETNAM?
In Vietnam, Laos and Thailand oversampling of private sector, coined the ‘booster sample’ is also being conducted in response to stakeholder interest to understand the private sector.

This figure provides a country example of this approach in Vietnam. In this case, 78 selected communes are included in the sample from six provinces, and include 39 located in border areas and 39 located in non-border areas. Yellow highlights indicate booster areas for which an additional sample of private health facilities will be taken using a census approach.

HOW IS THE FIELDWORK IMPLEMENTED?
The ACTwatch outlet survey includes all outlets with the potential to sell antimalarial medicines. As many of these potential outlets may be unregistered, mobile or recently opened official listings of these shops and their locations are not typically available. For example, 2011 ACTwatch data from Cambodia show that many of the outlets stocking antimalarials are pharmacies, drugs stores, general retailers and itinerant drug vendors. These outlet locations are not available on official lists. A census approach is therefore used in ACTwatch, supported by the use of key informant interviews with local officials, local maps, and lists of registered outlets where available.

WHAT IS AN OUTLET CENSUS?
This involves a team of data collectors moving systematically through a defined area in order to identify all outlets that have the potential to sell or distribute antimalarials. For example, in Cambodia interviewers walked and travelled with motorbikes throughout an entire sampled area looking for and identifying all health facilities, pharmacies, drug shops, general retail outlets, community health workers, and itinerant drug vendors.
WHAT INFORMATION IS RECORDED ON THE AUDITS?

For each type of antimalarial and RDT, information is recorded on an audit sheet to address key elements of the product. This includes the brand name, the manufacturer, country of manufacturer, formulation, strength, amount sold in the last seven days, and retail price. If a particular brand is available in multiple package sizes, strengths, or formulations, an audit sheet is completed for each unique product.

Comprehensive product information and provider reports on amount distributed and retail price allow for calculating estimates of antimalarial availability, price and relative market share.

HOW IS SUPPLY CHAIN COMPONENT IMPLEMENTED?

In instances where oral artemisinin monotherapy is found in the outlet, information is gathered from the provider to identify the source of the oral artemisinin monotherapy, including the type and location. Additional questions are administered to address the purchasing frequency, reasons for using the supplier as well as prescribing and dispensing practices, stock volume and expiration. An interview is then conducted with the supplier of the oral artemisinin monotherapy. The supplier is screened for oral artemisinin monotherapy availability, and a full audit of antimalarials is conducted for each supplier. Additional information is also gathered regarding their oral artemisinin monotherapy dispensing and wholesale practices.

The distribution of antimalarial stocking outlets in Cambodia, 2013.

WHAT HAPPENS AFTER AN OUTLET IS IDENTIFIED?

The outlet is screened to determine if the outlet has medicines or diagnostic tests in stock. Outlets are included in the survey if they have antimalarials or malaria diagnostic tests in stock at the time of survey or in the previous 3 months. Permission to conduct the interview will be obtained from the main provider.

HOW IS ANTIMALARIAL MEDICINE AND RAPID DIAGNOSTIC TEST INFORMATION CAPTURED?

Among outlets with antimalarials or/and malaria tests in stock a ‘full audit’ of the antimalarials is conducted. In this instance, information is recorded for each and every antimalarial and RDT identified in the outlet.
WHEN IS DATA COLLECTION?
Data collection is being conducted during the rainy season within each country, throughout Q3 and Q4 of 2015.

ACTwatch evidence will be available in early 2016 to illustrate antimalarial market share, price, availability and readiness of the GMS markets.

MYANMAR SCALE-UP
ACTwatch outlet surveys demonstrate dramatic increases in the ACT private sector market share relative to oral artemisinin monotherapy over time.

Since 2012, ACTwatch methods have been used in eastern and central Myanmar to monitor private sector supply and demand over time and assess the impact of a national ACT drug subsidy mechanism aimed at displacing oral artemisinin monotherapies.

After only nine months of supply through this mechanism, ACTwatch outlet surveys were able to demonstrate dramatic increases in the ACT private sector market share relative to oral artemisinin monotherapy among priority outlet categories over time through the distribution of ACT branded as SupaArte and Artel+, with packaging that includes a quality assurance padonma (lotus flower) logo.

The expansion into the western coastal and border regions under the GMS ACTwatch project will allow for a national perspective of the Myanmar antimalarial market and how this may be influenced by different country borders.

Trends in private sector antimalarial market share in intervention areas, Eastern Myanmar
WHAT IS ACTWATCH?

ACTwatch is a multi-country research project designed to provide timely, relevant, and high quality antimalarial market evidence. Launched in 2008 with funding from the Bill and Melinda Gates Foundation, it is currently implemented in 13 countries with additional funding from UNITAID and the DFID. Standardized tools and approaches are employed to provide comparable data across countries and over time.

FOR MORE INFORMATION CONTACT:

Dr. Megan Littrell, Principal Investigator
mlittrell@psi.org
1120 19th Street, NW | Suite 600
Washington, DC 20036
psi.org