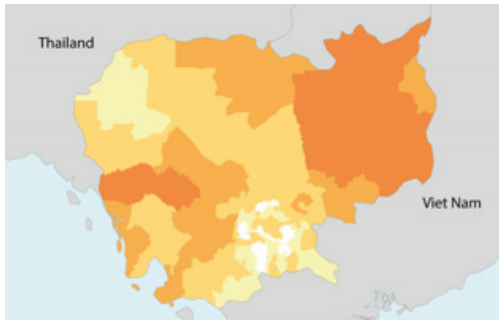


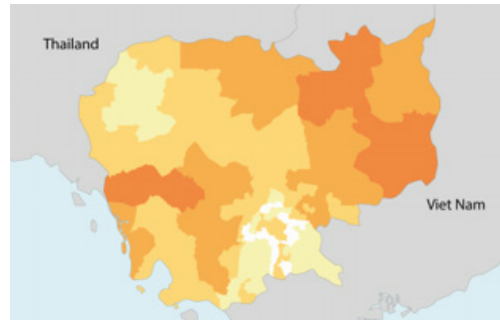
FEVER LANDSCAPE

FOCUS ON MALARIA SITUATION

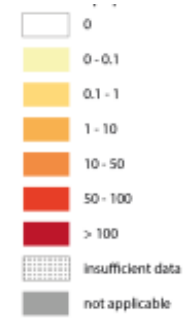
API* OF Pf (2017)



API* OF Pv (2017)



CONFIRMED CASES PER 1,000 POP



API: ANNUAL PARASITE INCIDENCE

TEST POSITIVITY IN PUBLIC HOSPITALS

Governmental data	2005	2010	2017
Share of suspected cases tested (RDT or microscopy)	~90%	~95%	~100%
Test positivity (RDT or microscopy)	~40%	~30%	~25%

Cases of malaria appear to be under-reported, with the WHO estimating that there are actually over ~five times more cases and many more deaths than reported each year. **The main reasons are:**

- imperfect access to care in Cambodia
- the informal private sector is not included in reporting

MALARIA EPIDEMIOLOGICAL PROFILE (2016)

Parasite prevalence per 1,000	Population in area:		
	Malaria free	Low transmission (0-1 case per 1,000 pop)	High transmission (>1 case per 1,000 pop)
	4.7M (29%)	3.6M (23%)	7.7M (48%)
Major <i>plasmodium</i> species	<i>P. falciparum</i> : 58% ; <i>P. vivax</i> : 41%		
Drug-resistant malaria	Yes in some areas		
Estimated tested cases	168K		
Reported confirmed cases	36K (of which 30K from private sector)		
Estimated cases*	208K [186K-236K]		
Reported deaths	1		
Estimated deaths*	345 [27-590]		

71% of the Cambodian population is living in an at-risk transmission zone

The reported share of suspected cases tested was close to 100% in 2017 while the reported positive rate dramatically decreased between 2010-2017

NATIONAL MALARIA STRATEGY PLAN AND SURVEILLANCE

NATIONAL MALARIA STRATEGY PLAN

DECISION-MAKERS	OTHER MALARIA INFLUENCERS (LOCAL)	OTHER MALARIA INFLUENCERS (INTERNATIONAL)
<p>Ministry of Health</p> <p>CNM (National Centre for Parasitology, Entomology and Malaria)</p>	<p>Cambodian Red Cross</p> <p>Institute Pasteur-Cambodia</p>	
<h3>TARGET</h3>	<p>The National Strategic Plan (NSP) for Elimination of Malaria for 2011-2025 is based on the following goals:</p> <p>By 2015 – To move towards pre-elimination of malaria across Cambodia with special efforts to contain ACT-resistant Pf</p> <p>By 2020 – To move towards elimination of malaria across Cambodia with an initial focus on Pf and ensure 0 deaths</p> <p>By 2025 – To achieve phased elimination of all forms of malaria in Cambodia</p> <p>In 2014, a coordinated strategy to eliminate malaria in the Greater Mekong Subregion (GMS) was developed. It resulted in the Malaria Elimination Action Framework (MEAF) 2016-2020 update to the NSP. The MEAF intends to leverage operational district malaria teams to target elimination strategies in the whole country by 2019 and Pf elimination by 2020.</p>	
<h3>KEY INTERVENTIONS TO ACHIEVE TARGET</h3>	<ul style="list-style-type: none"> Provision of comprehensive services for early diagnosis and effective treatment (free of charge in public health facilities) Halting the spread of anti-malaria drug resistant parasites Controlling the sale of fake or substandard drugs in the markets through close cooperation with key players in the private sector Conducting Mass Drug Administration (MDA) in selected parts of the country Developing coordination of an intersectoral approach both within and outside the country 	

MALARIA SURVEILLANCE

Cambodia has a separate Malaria Information System (MIS) from the MoH Health Management Information System (HMIS). Both collect data on malaria patients and services, but the MIS is considered more timely and reliable.

The MIS has an exceptional amount of data such as the number of malaria cases treated, by severity and by age group, and the number of RDTs used. All data can be segregated by province and by month.

Reporting is incomplete as access to care is poor and many patients seeking care consult the private sector which is not always part of the reporting, in particular the non-medical providers (e.g. unlicensed doctors, traditional healers, etc.).

Cambodia has the ambitious goal to eliminate *P. falciparum* by 2020 and all forms of malaria by 2025

Even though Cambodia has a good MIS, some private sector actors are not reporting

Sources: Research paper, WHO, NDOH, Advention

ANTIMICROBIAL RESISTANCE (AMR)

“AMR is a significant public concern in Cambodia where antibiotics are often sold over the counter.” MALARIA CONSORTIUM, SENIOR TECHNICAL ADVISOR

THE GOVERNMENT HAS TAKEN STEPS TO TACKLE AMR...

2011	First National Workshop for containment of ABR (Antibiotic resistance)
2012	Creation of a national technical working group for combatting AMR
2013	Analysis of the national situation on AMR to identify the burden of AMR
2014	Cambodia is among the few countries having developed a national policy and strategic plan for combatting AMR
2017	Cambodia endorsed its National SOP for national AMR surveillance system
2017	Cambodia is registered within the Global Antimicrobial Resistance Surveillance System (GLASS) developed by the WHO

...BUT THE CAPACITY TO EFFECTIVELY TACKLE AMR IS LOW

The main barriers to combating AMR in Cambodia include:

- Limited awareness of AMR among most stakeholders
- Limited surveillance data to support evidence-based decisions and local guidelines
- Limited access to microbiological culture and diagnostic test
- Over use of antibiotics in health and animal
- Limited infection prevention and control measures in health facilities
- Limited coordination among different sectors (health, animal, agricultural, environmental)

WHO GLASS Report 2016-2017

“WHO Regional Office for the Western Pacific has been providing support to several countries in the Western Pacific Region such as Cambodia to build capacity and establish surveillance systems for antimicrobial use as well as antimicrobial stewardship programmes”.

REGULATION REGARDING ANTIBIOTICS IS BEING PROMOTED BY THE MoH, BUT ADHERENCE IS LIMITED IN THE PRIVATE SECTOR

“Cambodia is very concerned by AMR and antibiotic prescription is closely regulated. While nurses can prescribe 1st line antibiotics, only doctors can prescribe 2nd line antibiotics. Generally, it is recommended to perform a blood count before prescribing antibiotics.” CNM, Cambodia, Lab expert 2

“MoH attaches great importance that patients are going to health centers for antibiotics. We tried to introduce iCCM for acute respiratory infection at CHW level and the MoH resisted strongly.” Malaria Consortium, Senior technical advisor



“Antibiotics should not be sold over the counter, unfortunately it is not enforced. The country was successful in the OTC artesunate ban because they had external funding, but there is no such thing for antibiotics.” Malaria Consortium, Cambodia, Country director

AMR is a significant public health concern, but regulation only affects public sector practices due to limited enforcement

Public sector recommendations are to test before prescribing antibiotics

MALARIA EPIDEMIOLOGY AND AMR LANDSCAPE IN PRIORITY COUNTRIES

PRIORITY COUNTRIES*



MALARIA EPIDEMIOLOGICAL PROFILE

	VIET NAM	CAMBODIA	S. AFRICA	INDIA	PAKISTAN	MYANMAR	THAILAND
Parasite prevalence per 1,000 population	<1	–	<1	<1	1.7	<1	<1
Population living in malaria free area	25.1M (26%)	4.7M (29%)	51M (90%)	87.9M (7%)	3.3M (2%)	21.8M (40%)	34M (50%)
Population living in low transmission area	63.9M (67%)	3.6M (23%)	3.4M (6%)	1,100M (81%)	136.7M (69%)	23.6M (44%)	28.5M (42%)
Population living in high transmission area	25.1M (7%)	7.7M (48%)	2.3M (4%)	162.5M (12%)	57M (29%)	8.5M (16%)	5.4M (8%)
Proportion of <i>P. falciparum</i>	64%	58%	90%	62%	21%	66%	42%
Proportion of <i>P. vivax</i>	35%	41%	5%	37%	78%	34%	58%

MALARIA CASES AND DEATH

Country's reported tested cases	2.6M	168K	56K	125M	6.5M	664K	1.1M
Country's reported confirmed cases	4.5K	36K	22K	0.8M	351K	78K	8K
WHO's estimated cases	5.5K	208K	22.5K	9.6M	956K	240K	52K
Country's reported deaths	6	1	301	0.2K	113	37	33
WHO's estimated deaths	9	345	274	16.7K	805	490	<50

AMR LANDSCAPE

Average DDD**/person in 2015 (Avg in LMICs is 4.9)	11.5	–	9.2	4.9	7.1	–	6.7
Endorsement of the AMR National Plan	2013	2014	2014	2017	2017	2017	2016

Notes: (*) Last available year; (**) Defined Daily Dose allowing for cross-country comparison. Sources: WHO, World Bank, GF, interviews, Advention