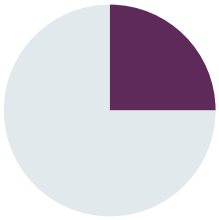
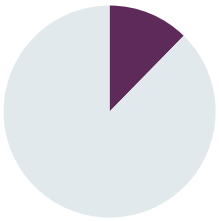
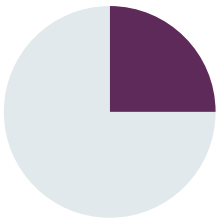
MYANMAR

FIND
Because diagnosis matters

FEVER LANDSCAPE

QUALITY OF REPORTED DATA

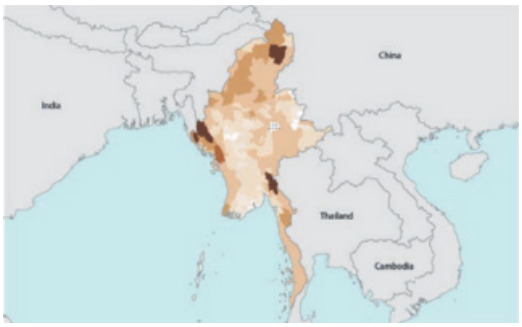
METRICS	QUALITY	IDENTIFIED GAPS OR PROBLEMS
NUMBER OF MALARIA CASES AND DEATHS		Cases of malaria appears to be under-reported, with the WHO estimating that there are actually over three times more cases and thirteen times more deaths than reported each year: • Myanmar has an important informal health sector that is poorly included in the reporting because of a lack of regulation or enforcement - The Myanmar surveillance system does not ensure complete and timely reporting from all health actors (public facilities, private sector, NGOs, defense health services/police health services …) into NMCP - "In 2016, PSI started involving the private sector and now more than 10% of reported cases come from the informal private sector." PSI, Myanmar, Malaria Elimination 2 The case reporting system works well at lower levels of the health system and the volume, detail and quality of data being reported are correct. Overall, the paper-based data collection element of the system is well-designed and appropriate for the capacity of the health staff but information systems should be modernized to end the sole use of excel spreadsheets.
BURDEN OF OTHER INFECTIOUS DISEASES CAUSING FEVER		Only limited data was found on other infectious diseases. Data on infectious diseases collected by the Burmese authorities are generally unreliable due to methodological weaknesses, missing data, and numerical discrepancies.
ANTIMICROBIAL RESISTANCE		Myanmar is enrolled in GLASS (Global Antimicrobial Surveillance System) as well as in ATLASS (Assessment Tool for Laboratories and AMR Surveillance Systems) but data are not centralized and reporting is of questionable quality.

Quality of reported data is a significant challenge in Myanmar

Sources: WHO, Advention

FOCUS ON MALARIA SITUATION

API* OF Pf (2016)



API* OF Pv (2016)

CONFIRMED CASES
PER 1,000 POP

- 0
- 0 - 0.1
- 0.1 - 1
- 1 - 10
- 10 - 50
- 50 - 100
- > 100

API: ANNUAL PARASITE INCIDENCE

TEST POSITIVITY IN PUBLIC HOSPITALS

Governmental data	2005	2010	2015
Share of suspected cases tested (RDT or microscopy)	~58%	~80%	~100%
Test positivity (RDT or microscopy)	~35%	~35%	~10%

GOVERNMENTAL DATA

MALARIA EPIDEMIOLOGICAL PROFILE (2016)

Parasite prevalence per 1,000 (2015)	<1		
Population in area:	Malaria free	Low transmission (0-1 case per 1,000 pop)	High transmission (>1 case per 1,000 pop)
	21.8M (40%)	23.6M (44%)	8.5M (16%)
Major *plasmodium* species	***P. falciparum***: 66% ; ***P. vivax***: 34%		
Drug resistant malaria	Yes in some areas, mostly along the border		
Estimated tested cases	664K		
Reported confirmed cases (health facility)	78K		
Estimated cases*	240K [170K-340K]		
Reported deaths	37		
Estimated deaths*	490 [27-980]		

60% of the population of Myanmar is living in an at-risk transmission zone

While the reported positive rate dramatically decreased between 2010-2015, the reported share of suspected cases tested was close to 100% in 2015

Note: (*) estimated by the WHO. Sources: WHO, Advention

NATIONAL MALARIA STRATEGY PLAN AND SURVEILLANCE

NATIONAL MALARIA STRATEGY PLAN

DECISION-MAKERS	OTHER MALARIA INFLUENCERS (LOCAL)	OTHER MALARIA INFLUENCERS (INTERNATIONAL)
MoHS Vector Borne Disease Control Unit NMCP	Asian Collaborative Training Network for Malaria (ACTMalaria) Myanmar Medical Association	

TARGET

By 2020 – reduce the incidence of malaria to less than one case per 1,000 population at-risk in all states/region

By 2025 – interrupt transmission of and eliminate indigenous Pf

By 2030 – eliminate all indigenous malaria in a phased manner and prevent the re-establishment of local malaria transmission due to importation in all areas where it has been eliminated

KEY INTERVENTIONS TO ACHIEVE TARGET

Provide universal coverage for diagnosis and treatment in health facilities and at community level

Reduce the parasite reservoir through effective radical treatment of all cases

Focus on detecting, protecting, and providing access to diagnosis and treatment for priority population groups

Detect and treat asymptomatic parasite carriers by screening appropriate populations using rapid and highly sensitive diagnostic tools

Reinforce and scale up quality microscopy and access to quality assured RDTs

Strengthen malaria programme management, to ensure that it is operating optimally at all levels of the health system

Engage formal and informal private sectors to improve the availability of quality-assured products

MALARIA SURVEILLANCE

The surveillance system is transitioning to District Health Information System 2 (DHIS-2) for routine reporting, Demographic Health Survey, and Malaria Indicator Survey

The goal is the Integration of malaria data from public, private, NGOs and community sectors into one comprehensive national malaria information system

Systematic data collection and data transmission have been reinforced throughout the training of NMCP staff as well as of basic health staff in surveillance and computer literacy

Myanmar aims to eliminate malaria by 2030

Sources: WHO, PMI, Advention

MALARIA EPIDEMIOLOGY AND AMR LANDSCAPE IN PRIORITY COUNTRIES

		PRIORITY COUNTRIES*						
		VIET NAM	CAMBODIA	S. AFRICA	INDIA	PAKISTAN	MYANMAR	THAILAND
MALARIA EPIDEMIOLOGICAL PROFILE	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 *P. falciparum*	64%	58%	90%	62%	21%	66%	42%
	Proportion of *P. vivax*	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

OTHER INFECTIOUS DISEASES CAUSING FEVER

	ENDEMICITY	SURVEILLANCE SYSTEMS	CASES PER YEAR*	INTEREST FOR AN RDT
Dengue *Dengue virus*	Endemic in all regions	National detection programme with referent laboratories in each region	<30K	Strong demand for an RDT targeting a common pathogen
Chikungunya *Chikungunya virus*	Probably endemic in all regions	Detection only possible at the National Health Laboratory	n.a.	Moderate demand for an RDT as the reported case load is low
Zika *Zika virus*	Probably endemic in all regions	Detection only possible at the National Health Laboratory	n.a.	Moderate demand for an RDT as the reported case load is low
Melioidosis *Burkholderia pseudomallei bacteria*	Local transmission confirmed, possibly endemic, lack of data	No formal surveillance system, referral of clinical diagnoses to region authorities	<100	Moderate demand for an RDT as the reported case load is low
Leptospirosis *Leptospira genus bacteria*	Local transmission confirmed, possibly endemic, lack of data	No formal surveillance system	n.a.	Low demand for an RDT as the pathogen's endemicity is uncertain
Scrub typhus *Orientia tsutsugamushi bacteria*	Local transmission confirmed, possibly endemic, lack of data	No formal surveillance system	n.a.	Low demand for an RDT as the pathogen's endemicity is uncertain
Murine typhus *Rickettsia typhi bacteria*	Local transmission confirmed, possibly endemic, lack of data	No formal surveillance system	n.a.	Low demand for an RDT as the pathogen's endemicity is uncertain

A wide range of infectious pathogens causing febrile illnesses are endemic in Myanmar

However, very limited surveillance and low reported case load limit interest in RDTs for most pathogens

Note: (*) Best data available, reported data. Sources: MoHS, Advention

ANTIMICROBIAL RESISTANCE (AMR)

THE GOVERNMENT HAS TAKEN ACTIONS TO TACKLE AMR

2007-2008

Nation-wide survey found that 4.2% and 10% of cases in new and previously treated TB cases respectively were multidrug-resistant (MDR)

2011

Signature of the Jaipur Declaration on AMR that recognizes that it is imperative that the national governments accord utmost priority to this problem to preserve the efficacy of antibiotics in the fight against microbial diseases.

2016

National Strategic Plan for Health Laboratories: NSPHL 2017-2022 with National surveillance for AMR

2017

National Action Plan for AMR

2018

National Multi-sectoral Steering Committee (NMSC) for combating AMR with 19 members supporting the 'One Health' approach to designing and implementing programmes, policies, legislation and research in which multiple sectors communicate and work together to achieve better public health outcomes

Myanmar has called on countries in the Mekong basin region to cooperate in combating antimicrobial resistance under a regional health security project

…BUT WORK REMAINS TO BE DONE

WHO Global Antimicrobial Resistance Surveillance System (GLASS) Report: Early Implementation 2016-2017

- Myanmar is at the early stage of surveillance set up, and surveillance guidelines have been developed but not fully implemented. AMR surveillance data exist but are not centralized, with limited analysis and representativeness

Regional Workshop on AMR in South East Asia of 26-28 March 2018 recommended to:

- Establish a systematic, standardized process to collect, assess and share data, maps and trends on AMR hazards
- Promote establishment of the One Health surveillance based on coordination between human and animal health
- Insert AMR knowledge in undergraduate and post graduate medical, nursing and basic health teaching curriculum

AMR has been identified as a global health issue but structuring an adequate answer will require more cooperation for a One Health approach

Sources: WHO, National Health Laboratory, Advention