Meeting Report

EIGHTH MEETING OF THE GREATER MEKONG SUBREGION THERAPEUTIC EFFICACY STUDY NETWORK



28–29 October 2020 Virtual Meeting



WORLD HEALTH ORGANIZATION

REGIONAL OFFICE FOR THE WESTERN PACIFIC

RS/2020/GE/39(Virtual)

English only

MEETING REPORT

EIGHTH MEETING OF THE GREATER MEKONG SUBREGION THERAPEUTIC EFFICACY STUDY NETWORK

Convened by:

WORLD HEALTH ORGANIZATION REGIONAL OFFICE FOR THE WESTERN PACIFIC

Virtual meeting 28–29 October 2020

Not for sale

Printed and distributed by:

World Health Organization Regional Office for the Western Pacific Manila, Philippines

February 2021

NOTE

The views expressed in this report are those of the participants of the Eighth Meeting of the Greater Mekong Subregion Therapeutic Efficacy Study Network and do not necessarily reflect the policies of the conveners.

This report has been prepared by the World Health Organization Regional Office for the Western Pacific for the Member States in the Region and for those who participated in the virtual Eighth Meeting of the Greater Mekong Subregion Therapeutic Efficacy Study Network from 28 to 29 October 2020.

CONTENTS

ABBREVIATIONS	
	1
1.1 Background	⊥ 1
1.1 Deckground	1
2 PROCEEDINGS	1 1
2.1 Opening session	1
2.2 Paview of recommendations from 2018 and progress	ייי ר
2.2 Neview of the Mekong Malaria Elimination programme in the GMS	2
2.4 Updates on global antimalarial drug resistance, including partial resistance to artemisinin and	
2.4 Optices on global antimataria drug resistance, including partial resistance to architemin and	۱ ۱
2.5 Updates from GMS countries on the status of TES or iDES	 6
2.5 Optices from GWB countries on the status of TES of IDES	0 6
2.5.1 Cambould	0 7
2.5.2 Lao reopies Democratic Republic	/ 8
2.5.5 Wigaminar	0
2.5.5 China (Vunnan Province)	ر ۵
2.5.5 Clinia (Tulliant Tovince)	10
2.6. Opening session of day two	11
2.7 Different drug efficacy surveillance systems: routine TES and iDES in the context of	11
elimination and importation	11
2.8 Quality control in TES and iDES: implementation challenges	13
2.9 Updates on Kelch 13, plasmespsin and other molecular markers for resistance in the GMS	14
2.10 Review of challenges affecting effective management of malaria in the context of current	1-1
nandemic situation	15
2 11 Plenary discussions O& A	16
3 PRESENTATION OF COUNTRY PLANNING AND BUDGET FOR TES. IDES AND	10
MOLECULAR MARKERS	. 17
3.1 Cambodia	17
3.2 Lao People's Democratic Republic	17
3.3 Myanmar	
3.4 Viet Nam	17
3.5 China (Yunnan Province)	17
3.6 Thailand	18
4. CONCLUSIONS AND RECOMMENDATIONS	. 18
4.1 Conclusions	18
4.2 Recommendations	19
4.2.1 Recommendations for Member States	19
4.2.2 Recommendations for WHO	20
ANNEXES	
Annex 1. Programme agenda	
Annex 2. List of participants, temporary advisers, representatives, international partners and	

Secretariat

KEYWORDS

Antimalarials - therapeutic use / Drug resistance / Malaria-prevention and control / Mekong valley

LIST OF ABBREVIATIONS

ABER	annual blood examination rate
ACPR	adequate clinical and parasitological response
ACT	artemisinin-based combination therapies
AFRIMS	the Armed Forces Research Institute of Medical Sciences
AL	artemether-lumefantrine
AM	intramuscular artemether
API	annual parasite index
AQ	amodiaquine
AS	artesunate
AS-AQ	artesunate-amodiaquine
AS-MQ	artesunate-mefloquine
AS-PY	artesunate-pyronaridine
AS-SP	artesunate+sulfadoxine-pyrimethamine
BMGF	Bill and Melinda Gates Foundation
eCDS	electronic Communicable Disease System
CHAI	the Clinton Health Access Initiative
CIOMS	Council for International Organizations of Medical Sciences
CMPE	Lao PDR Center for Malaria, Parasitology, and Entomology
CNM	Cambodian National Center for Parasitology, Entomology and Malaria Control
CQ	chloroquine
CSO	civil society organization
DDC	Thailand Department of Disease Control
DHA-PPQ	dihydroartemisinin-piperaquine
DHIS2	District Health Information System 2
DSME	digital solutions for malaria elimination
DVBD	Thailand Division for Vector Borne Disease
ECAMM	external competency assessment of malaria microscopists
ERAR	Emergency Response to Artemisinin Resistance
GLURP	glutamate-rich protein
GMS	Greater Mekong subregion
iDES	integrated Drug Efficacy Surveillance
IPT	intermittent preventive treatment
K13	Kelch 13
LLIHN	long-lasting insecticidal hammock net
LLIN	long-lasting insecticidal net
Lao PDR	Lao People's Democratic Republic
MEDB	Malaria Elimination Databasa
MME	Makana Malaria Elimination programma
MMD	mekong Malaria Emmation programme
MMS	mobile and migrant populations
MORU	Tropical Medicine Research Unit
MPAC	Malaria Policy Advisory Committee
MQ	mefloquine
MSP	merozoite surface proteins

NIMPE	Viet Nam National Institute of Malariology, Parasitology and Entomology
NIPD	National Institutes for Parasitic Diseases (China)
NMP	National Malaria Programme
NRA	national regulatory agencies
NTG	national treatment guidelines
PCR	polymerase chain reaction
G6PD	glucose-6-phosphate dehydrogenase
PHEOC	public health emergency operations centre
PMI	President's Malaria Initiative
PPE	personal protective equipment
PPQ	piperaquine
PQ	primaquine
PY	pyronaridine
QA	quality assurance
QC	quality control
RAI	Regional Artemisinin-resistance Initiative
RDMA	Regional Development Mission for Asia
RDSP	Regional Data Sharing Platform
RDT	Rapid Diagnostic Test
RSC	Regional Steering Committee
SLD	single low dose
SOP	standard operating procedure
TDA	targeted drug administration
TES	therapeutic efficacy studies
TICA	Thailand International Cooperation Agency
TQ	tafenoquine
WHA	World Health Assembly
WHO	World Health Organization

SUMMARY

On 28 and 29 October 2019, the World Health Organization (WHO) Mekong Malaria Elimination (MME) programme hosted the virtual Eighth Meeting of the Greater Mekong Subregion Therapeutic Efficacy Studies Network. Representatives from malaria control programmes in the Greater Mekong Subregion (GMS) Member States – Cambodia, China, the Lao People's Democratic Republic, Myanmar, Thailand and Viet Nam – attended the two-day workshop to monitor progress and review the results of therapeutic efficacy studies (TES) as well as to plan and implement future TES and integrated drug efficacy surveillance (iDES). Focal points from GMS countries as well as technical experts and partners also attended the meeting to review the current TES/iDES status and the efficacy of antimalarial drugs and to identify alternative artemisinin-based combination therapies (ACTs) for revision of national treatment guidelines (NTGs), as necessary.

The main discussion points included: challenges in countries regarding the shift from TES to iDES, drug efficacy updates and the changes in second-line treatments, data from molecular markers, the status of artemisinin resistance in the GMS, and guidelines on quality control (QC).

The key conclusions of the meeting included the following:

- **Overview of GMS malaria elimination:** From January to September 2020, the GMS countries demonstrated approximately a 61% decrease of *Plasmodium falciparum* cases and a 32% decrease of *P. vivax* cases compared to the same period in 2019. Implementation of activities continued as expected despite the coronavirus disease 2019 (COVID-19) pandemic. The relative importance of *P. vivax* cases is likely to increase as countries approach elimination; 82% of cases currently are *P. vivax*. Malaria is mostly concentrated in remote areas, where the disease disproportionately affects travellers to malaria-risk areas as well as mobile and migrant populations. Intensification strategies are being planned and implemented to reach those at highest risk, particularly in Cambodia, which is launching an aggressive approach.
- Status of artemisinin resistance: Data suggest that there has been no major increase in artemisinin partial resistance and multidrug resistance in the past year. GMS countries face a critical window of opportunity to eliminate *P. falciparum*.
- National treatment guidelines (NTGs): ACTs are available and have been tested for efficacy throughout the GMS. All countries are in the process of changing their second-line treatment to ACTs, in place of quinine. Thailand has adopted artesunate-pyronaridine (AS-PY) in two provinces along its border with Cambodia, and Viet Nam has begun using AS-PY in provinces reporting more than 10% failures of dihydroartemisinin-piperaquine (DHA-PPQ). Low-dose primaquine (PQ) for the treatment of *P. falciparum* malaria is included in all NTGs but is not fully operationalized in all countries.
- **Drug efficacy:** TES are the gold standard for monitoring drug efficacy to inform treatment policy. In 2020, the COVID-19 pandemic caused delays in activity implementation in some countries resulting in some additional challenges to follow-up.
 - **Cambodia:** Artesunate-mefloquine (AS-MQ) and AS-PY are demonstrating optimal efficacy. Piperaquine (PPQ) resistance has been detected in Cambodia, leading to policy change.
 - **Lao People's Democratic Republic:** Similar to Cambodia, AS-MQ and AS-PY are efficacious. The data on artemether-lumefantrine (AL) between 2019 and 2020 show that AL remains highly efficacious.
 - **Myanmar:** Data suggest that AL, AS-PY, DHA-PPQ and chloroquine (CQ) (for *P. vivax*) remain highly efficacious.
 - **Viet Nam:** National data suggest that AS-PY and AS-MQ are also efficacious, while DHA-PPQ shows lower levels of efficacy in at least four provinces. Molecular data indicate piperaquine (PPQ) resistance in Viet Nam.

- **Thailand:** DHA-PPQ is efficacious at the border with Myanmar, while AS-PY became the first-line treatment in the country's northeast due to high DHA-PPQ resistance. CQ (for *P. vivax*) showed efficacy in 2019 and 2020 compared to 2018 (Sisaket).
- **China (Yunnan):** No TES has been conducted in Yunnan since 2016 due to low malaria incidence. iDES formally started in Yunnan in areas bordering Myanmar in 2020.
- Integrated drug efficacy surveillance: In elimination settings, the collection of drug efficacy data can be shifted from a system comprising sentinel sites to an iDES system. Cambodia, China (Yunnan), the Lao People's Democratic Republic, Thailand and Viet Nam have piloted iDES, and Cambodia plans to scale up iDES in all pilot areas in 2021. Starting in 2021, the Lao People's Democratic Republic will be scaling up iDES in 125 elimination districts and incorporating it as a routine component of case investigations. Thailand has expanded iDES nationwide and used data to drive policy change.
- **Quality control monitoring:** Monitoring helps to identify gaps and challenges for improvement in TES and iDES implementation. In the past year, most countries were able to continue quality control activities, but travel restrictions due to COVID-19 has resulted in some delays.
- Genetic markers: The efficacy of AS-MQ and resistance to PPQ are confirmed by molecular markers in Cambodia, the Lao People's Democratic Republic, Thailand and Viet Nam. AS-MQ introduction is clearing KEL1/PLA1 strains (artemisinin and piperaquine resistant) in Cambodia. There is a potential risk of the spread of the triple mutant (piperaquine, mefloquine and artemisinin) associated with the implementation of triple ACTs. Amodiaquine (AQ) resistance is confirmed in Cambodia. Close monitoring, therefore, remains crucial for Cambodia.

预览已结束, 完整报告链接和二维码如下:



https://www.yunbaogao.cn/report/index/report?reportId=5 23999