GMS Strategy Targets

By 2020 or earlier
Transmission of *P. falciparum* malaria interrupted in all areas of multidrug resistance, including ACT resistance

By 2020
*P. falciparum* malaria eliminated in Cambodia
All species of human malaria eliminated in Yunnan Province, China

By 2025
*P. falciparum* malaria eliminated in all countries of the GMS
All species of human malaria eliminated in Cambodia and Thailand

By 2030
All species of human malaria eliminated in all countries of the GMS
Progress in Malaria Elimination in GMS

Malaria cases in GMS countries

Malaria deaths in GMS countries

* Cases from some partners in Myanmar are not included
Countries Faced Challenges in 2017

Changes in number of malaria cases in GMS countries*

- The total number of cases in GMS has declined in 2017.
- However, the number of cases is **higher** in 2017, compared to 2016, in Cambodia and Viet Nam.
- Number of cases is **higher** in second half of 2017, compared to 2H 2016, in Lao PDR.

*Cases from some partners in Myanmar are not included.
Epidemiology of Malaria in GMS (2017)

Regional Map of Confirmed Cases by State/Province

Annual Parasite Incidence (API) by District*

confirmed cases

API/1000

0 - 0
0 - 0.2
0.2 - 0.5
0.5 - 1
1 - 3
3 - 5
> 5

*Provincial levels in Viet Nam and Thailand; State/Region level in Myanmar

Source: WHO subregional database
Epidemiology of Malaria in GMS (Continued)

Annual Blood Examination Rate (ABER) in 2017

% of *P. falciparum* cases in 2017

Source: WHO subregional database
Examples of Case Distributions in GMS Lao PDR and Cambodia (2017)

Source: WHO subregional database
Progress in Areas with Multidrug Resistance (Targeted for *P. Falciparum* Elimination by 2020)

% Change in Cases (2015 vs. 2017)

Annual Parasite Incidence (2017)

Source: WHO subregional database
Major Issues in MME

A. Ensuring sustainable funding

B. Project implementation

C. Monitoring and addressing multidrug resistance

D. Improving surveillance
A. Sustainable Funding

Funding contributions to malaria programme
(Million USD, 5 GMS countries, excluding China)

Government spending includes both national malaria control programmes (NMCPs) and passive case detection (PCD).

- Significant investment is made in GMS countries but primarily with external sources (esp. GF)
- Domestic funding is less than 20% of total funding and declining in Cambodia and Viet Nam
- In addition, some countries have issues implementing all budget (such as Global Fund grant)
### B. Project Implementation

**Targeting High-Risk Populations**

#### Results from UNOPS survey in areas with Global Fund Grant

<table>
<thead>
<tr>
<th>Country</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cambodia</td>
<td>NA</td>
<td>NA</td>
<td>51%</td>
<td>NA</td>
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<tr>
<td>Lao PDR</td>
<td>16%</td>
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<td>NA</td>
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<td>Myanmar</td>
<td>43%</td>
<td>NA</td>
<td>50%</td>
<td>NA</td>
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<td>Thailand</td>
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</tr>
<tr>
<td>Viet Nam</td>
<td>NA</td>
<td>85%</td>
<td>89%</td>
<td>95.6%</td>
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</table>

<table>
<thead>
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<th>Country</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
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<td>Cambodia</td>
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<td>29%</td>
<td>NA</td>
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<td>Lao PDR</td>
<td>77%</td>
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<td>Ongoing</td>
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<td>Myanmar</td>
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<td>Thailand</td>
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<td>NA</td>
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<tr>
<td>Viet Nam</td>
<td>NA</td>
<td>84%</td>
<td>87%</td>
<td>90.5%</td>
</tr>
</tbody>
</table>

Source: UNOPS presentation at RSC (March 2018)
B. Project Implementation

Partnership Coordination

- The partnership landscape is highly complicated, as in this example from Myanmar.
- More complex landscapes require **significant coordination** by the government.

Source: Malaria supply chain in the GMS, WHO (2017)
B. Project Implementation

Distribution of Partners in Endemic Areas

Malaria Cases by Province in Myanmar in 2017 (Jan-Dec)

Distribution of Implementing Partners in Myanmar (2016)

Distribution of Village Health Volunteers in Myanmar (2016) (Total: 15,000)

Source: WHO subregional database and the Government of Myanmar

Mekong Malaria Elimination Programme
C. Monitoring & Addressing Multidrug Resistance

- GMS countries are considered to be the epicenter of antimalarial drug resistance
- Recent studies demonstrate high ACT failure rates
- 3 to 4 ACTs failing in Cambodia, Lao PDR and Thailand
- WHO supports 1) increasing number of drugs tested in Therapeutic Efficacy Studies (TES) and 2) integrated drug efficacy surveillance (iDES) in select areas of low malaria transmission
C. Monitoring & Addressing Multidrug Resistance
Distribution of Drug Efficacy in GMS

- Areas with MDR did not expand in 2015, with MDR strains limited in Cambodia, Lao PDR and Viet Nam
- Mefloquine combination (first line in Cambodia) is still effective although triple mutants are reported

Artesunate-amodiaquine
Artemether-lumefantrine
Artesunate-mefloquine
Artesunate-pyronaridine
DHA-piperaquine

TF > 10%  TF < 10%
C. Monitoring & Addressing Multidrug Resistance
Drug Quality Assurance and Management

Major Issues

- **Supply management** (e.g. procurement and distribution)
- **National regulatory authority capacity** to accelerate introduction of appropriate antimalarial drugs (e.g. new ACTs in resistant foci, second-line treatment)
- Timely **updates and implementation of national guidelines** (e.g. use of low-dose primaquine)
- **Quality assurance** throughout the lifecycle (e.g. pre-shipment testing and post-marketing surveillance)

Proposed support from WHO

- Support NMCPs to **update and operationalize national treatment guidelines** based on recent TES data
- Support timely, need-based access to Global Fund's **Rapid Supply Mechanism** (RSM)
- Support **procurement and supply chain management** (based on surveillance data)
- Strengthen **regulatory systems** in conjunction with other partners to ensure access to all available and new antimalarials and to expand pharmacovigilance and quality assurance
D. Improving Surveillance in GMS

**Key Areas of Work**

**Data Collection and Reporting**
- Build a cost-effective and sustainable surveillance system, especially in remote areas
- Include surveillance data from partners and private sector
- Timely reporting to the national database
- Implement case-based surveillance

**Data Use**
- Analyse & share surveillance data
- Take timely programmatic actions

**Validation**
- Regular validation of surveillance data
- Surveillance assessment

**Challenges**
Key Areas of Work

- **Partnership Forum**: Facilitating coordination and dialogue between partners and national programmes
- **Advocacy and Communication**: Advocacy and communication with external stakeholders
- **Cross-Country Projects**: Coordinating cross-border initiatives and regional data sharing platform (RDSP)

Supporting the GMS Malaria Elimination Strategy
Proposed Activities for Partnership Coordination

Objectives

To strengthen partnership coordination:

- Exchanging information (inc. activities & results) and best practices across partners
- Discussing major challenges/gaps for malaria elimination
- Discussing ways to strengthen collaboration and coordination of activities at country and regional levels to best meet country and subregional needs

Proposed activities

- Establish partners’ mailing list
- Partners’ activity summary
- Organize quarterly call
- Organize annual face-to-face meeting
Proposed Call for Action to Eliminate Malaria

Nay Pyi Taw, December 2017

- High-level meeting to accelerate elimination of malaria in the GMS before 2030

- Acknowledging the commitment of all GMS countries, including “One Region, One Strategy” as a guiding principle

- It is proposed that GMS Ministers will sign the call at the side event of WHA in May 2018
Regional Data Sharing Platform (RDSP)

Under the Global Fund’s Regional Artemisinin Resistance Initiative (RAI), WHO established the RDSP to:

- Collect & store malaria surveillance data
- Facilitate data sharing and analysis by countries

[Image of the Regional Data Sharing Platform (RDSP)]
Summary

- GMS countries significantly reduced the number of malaria cases from 2012-2016. As a result, malaria cases are concentrated in small geographical areas, requiring the strong focus of programmatic activities and the strengthening of technical and operational support in these places.

- Studies have confirmed the continued presence of parasites with antimalarial drug resistance, reaffirming the need for urgent elimination of malaria and continuous monitoring. At the same time, epidemiological data suggest that first-line drugs are still effective and that elimination is feasible despite resistance.

- Major common challenges include: Sustainable funding; project implementation (in hard to reach population, such as mobile and migratory population); addressing multidrug resistance; and improving surveillance.

- The Mekong Malaria Elimination (MME) team in WHO Cambodia supports malaria elimination in the GMS through partnership coordination; advocacy and communication; and cross-country projects.
Thank you