Update on malaria elimination in the Greater Mekong Subregion

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Outline

Background

Trend

Strategy

MME Team and Support

Map of TES Sites

Pharma support

Regional Coordination

Country Progress

Challenges
Background

- Since 2008: Artemisinin resistance containment and elimination
  - Thailand and Cambodia border
- April 2013: WHO launched ERAR framework for GMS
  - To contain artemisinin resistance in the GMS
  - ERAR established as regional hub to coordinate containment strategies
- MPAC, Sep 2014: Elimination of *P. falciparum* in the GMS by 2030
- 2016: Transitional year for the ERAR hub
  - Support national strategic plans to accelerate towards elimination
- 2017 onwards: GMS Malaria Elimination Efforts coordinated from Cambodia and implemented through strengthened country offices (backed by Regional Offices and GMP) supporting national efforts.
  - MME Coordinator Dr Hiromasa Okayasu in place since August 2017.
Malaria case reports in GMS from regional data sharing platform [2012- June 17]

Myanmar Confirmed malaria Cases (2012-June 2017)

China (Yunnan) Confirmed malaria Cases (2012-June 2017)
GMS Strategy overview

Goals

- To eliminate malaria by **2030** in GMS
  - eliminate *P. falciparum* malaria by **2025** (considering the urgency of multidrug resistance)
- To maintain malaria-free status and prevent reintroduction (where transmission has been interrupted)

Objectives

1. Interrupt transmission of *P. falciparum* in areas of multidrug resistance by **2020**, and in all areas of the GMS by **2025**.
2. Reduce malaria burden in high-transmission areas (<1 /1000 pop) and initiate elimination by **2020**
3. Prevent malaria reintroduction where interrupted.
GMS Strategy overview - Prioritization

• Regional level priorities
  • Interrupt transmission in areas with multidrug resistance in the border (Cambodia and Thailand);
  Reduce burden in high transmission areas (Myanmar)
  Control malaria in areas of resurgence.

• Country level priorities
  • Eliminate malaria in areas of multidrug resistance;
  Reducing burden in areas of transmission;
  Local analysis and better targeting of measures to high risk groups
GMS Strategy 2015-2030: milestones and targets

Malaria elimination policies/ NSPs developed/updated

Low transmission:
- surveillance for elimination

High transmission:
- Universal coverage
- systems strengthening (case & ento. surv.)

- Elimination of P.f. malaria in all GMS countries;
- Malaria eliminated in Cambodia and Thailand

2015
- Malaria transmission interrupted in 60% of districts in Thailand

2016

2017

2020
- P.f. transmission interrupted in all areas of MDR
- P.f malaria eliminated in Cambodia;
- Malaria eliminated in China including Yunnan;
- All 1st level subnational areas in GMS in elimination mode

2025

2030
- Malaria eliminated in all GMS
GMS Strategy overview - Key interventions

**Case detection and management**
- Universal access to quality diagnosis (public, private sector and community)
- Treatment with ACTs, primaquine for both *P. falciparum* (single dose) and *P. vivax* (anti-relapse therapy)
- Management of severe cases and imported cases to prevent deaths

**Disease prevention in transmission areas**
- Vector control
- Drug based approaches

**Malaria case and entomological surveillance**
- Mandatory notification
- Case based malaria surveillance
- Case, foci investigation and response
- Entomological surveillance
- Outbreak detection and response
- Vigilance

**Supporting elements**
- Innovation and research
- Enabling environment, including HSS, multi sector engagement and governance
MME team (Based in WHO Cambodia): key areas for work

**Partnership forum**
- Information sharing on partners’ activities
- Communication between partners and WHO (e.g. new guidelines)
- Facilitation of discussions over specific policies/activities

**Advocacy and external communication**
- High level advocacy (e.g. political forums, WHA)
- External Communication
- Resource mobilization

**Support cross-country initiatives (as needed)**
- Data sharing platform
- Cross-boarder collaboration
- Assessment of innovation (e.g. vaccine, new vector control)
Discussion on the WHO Support to GMS

• The launch of the malaria elimination strategy in the GMS leads to a shift from the Emergency Response to Artemisinin Resistance (ERAR) to a Mekong Malaria Elimination programme (MME).

• Numerous partners are present in the subregion, many funded by donors providing earmarked funding towards malaria elimination in the GMS.

• WHO will focus on support at country level

• WHO will strengthen the work with partners at country, regional and global levels
Regional coordination: tracking progress, surveillance

- Data elements and indicators agreed
  - Burden reduction and elimination phases
  - Case based pilot project implemented in Moung Russay, Cambodia
  - Emphasis on improving quality of data, completeness of data, timely submissions, inclusion of data from community provides, volunteers, partners and private sector.

- Regional Data Sharing Platform ➔ Mekong Malaria Elimination Database
  - Collation and sharing of data among all countries
  - Sharing of malaria data in border provinces
  - Regular production of Bulletins and reports
  - Mapping

- Country level:
  - Malaria elimination database and Case-based surveillance
    - Cambodia – starting in one out of 18 OD
    - Myanmar- 52/284 township (MS Access, others- Excel ➔ DHIS2)
    - Lao PDR – in 3/18 provinces in Northern Lao

- Data managers recruited in countries
  - Cam, Lao, MMR
51 sentinel sites
Cambodia - 11
Lao PDR - 6
Myanmar - 11
Thailand - 13
Viet Nam - 6
Yunnan, China - 4

Legend
- TES sentinel sites

GMS countries
- Cambodia
- China
- Lao People's Democratic Republic
- Myanmar
- Thailand
- Viet Nam

Source: WHO
Map Production:
Malaria Unit,
Department of communicable diseases
WHO/SEARO
08/07/2017

The boundaries and names shown on this map do not imply the expression of any opinion on the part of the WHO concerning the legal status of any country, territory, city, or area or of its authorities or concerning the delimitation of its frontiers or boundaries.
Main activities:

1. Assessment of Malaria Supply Chain in Greater Mekong Sub-region

2. Greater Mekong Sub-regional Workshop on Regulatory Actions to counter Substandard and Falsified Medicines, 25-27 April 2017, Bangkok, Thailand

3. Rational Drug Use Survey in Cambodia and Lao PDR

4. Surveillance on Quality, Source, and Prevalence of Antimalarial Medicines in the GMS
1. Assessment of malaria supply chain in the GMS

Full report at
2. Substandard and falsified medicines

GMS Workshop on Regulatory Actions to counter Substandard and Falsified Medicines, 25-27 April 2017, Bangkok, Thailand

- 3 day workshop co-organized by WHO and ADB
- 1 day with senior officials to discuss cross-border collaboration and to identify key potential regulatory actions needed to eliminate poor-quality medicines
- 2 day hands-on training on post-market surveillance, inspection, and reporting to WHO global surveillance

Recommendations for Member States

- strengthen post-marketing surveillance to monitor the quality and safety of products in the market;
- strengthen the regulatory capacity at the provincial level and to promote coordination and collaboration with other enforcement agencies such as police and customs;
- share information with neighbouring countries in the GMS on substandard and falsified products detected and any products withdrawn or recalled from the market; and
- promote reporting to the WHO Rapid Alert System to help and alert other Member States.

Recommendations for WHO:

- to reflect the suggestions from Member States into Global Fund Regional Artemisinin-resistance Initiative (RAI-2) malaria pharmaceutical activities to support Member States in strengthening regulatory capacity;
- to support Member States to organize bilateral cross-border workshops in provinces along country borders to strengthen regulatory capacity, collaboration and information sharing; and
- to strengthen the capacity of Member States in regulatory enforcement actions on manufacturers, wholesalers, distributors and retailers to tackle poor-quality products.
3. Rational drug use survey in Cambodia and Lao PDR

Facility-based fever management survey in public and private sectors in Lao PDR and public sector in Cambodia

- **Update:**
  - Lao PDR data collection completed.
  - Substantial delay in Cambodia and study restarted in October 2017

- **Challenges**
  - Delays in getting national ethical approval
  - Low fever patients due to seasonal variations
  - Extension of data collection days resulted in extra contracts
  - Challenging communication with CNM and provincial program managers
3. Rational drug use survey in Cambodia and Lao PDR

Health Care provider interviews in Lao PDR, March 2017

First training session, 27th - 28th Feb 2017, Phnom Penh, Cambodia
4. Surveillance on quality, source, and prevalence of antimalarial medicines in the GMS

- Countries covered: Lao PDR, Myanmar, Thailand, Viet Nam (unable to get clearance in Cambodia)
- Products collected: total of 386 samples in 4 countries
- Challenges
  - Government clearance and national ethical approval
  - Environmental risks (flooding in Vietnam) and logistical issues
Major findings from the survey

Total samples tested: 386
16 different antimalarials tested

1. Artemether inj
2. AL tab
3. Artesunate inj
4. Artesunate tab
5. Chloroquine inj
6. Chloroquine tab
7. Hydroxychloroquine tab
8. DHA-PIP tab
9. Doxycycline tab
10. Mefloquine tab
11. Primaquine tab
12. Pyrimethamine tab
13. Quinine inj
14. Quinine tab
15. Quinine capsules
16. Sulfamethoxazole-pyrimethamine tab

<table>
<thead>
<tr>
<th>Country</th>
<th>Total samples tested</th>
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<tbody>
<tr>
<td>Lao PDR</td>
<td>65</td>
</tr>
<tr>
<td>Myanmar</td>
<td>83</td>
</tr>
<tr>
<td>Thailand</td>
<td>122</td>
</tr>
<tr>
<td>Vietnam</td>
<td>116</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>386</strong></td>
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oAMT were found in Myanmar, Thailand, and Vietnam
Products are mainly from
- Guilin Pharma in China
- Mediplantex from Vietnam
- Atlantic Lab in Thailand
All products passed ID test i.e. API is present
- 17% did not have the right amount of API
- 4% failed dissolution test
- 21% failed impurity test
- Non-conformant products had been found with similar frequency in public and private sector
- No substantial difference between registered and non-registered products in terms of failure rate
Regional coordination

### Domain

#### Capacity building & technical collaboration
- GMS elimination training (WHOCC JIPD, China)
- Elimination Operation Framework (March 2017)
- National trainings in Cambodia, Lao, Myanmar, Thailand.

#### Cross border collaboration
- Cross-border initiatives: Lao-Thailand, Cambodia-Thailand, China-Myanmar, Myanmar-India/Bangladesh
- MMP strategy and toolkit developed, in country MMP pilots

#### Product quality
- Assessment of Malaria Supply Chain in Greater Mekong Sub-region
- Rational Drug Use Survey in Cambodia and Lao PDR
- Surveillance on Quality, Source, and Prevalence of Antimalarial Medicines in the GMS

#### Priority research
- Priority Operational research areas discussed at RSC, Hanoi
- Support of several ongoing research projects

#### Surveillance, M& E
- Surveillance Strengthening meeting for WPR completed June 2017
- Regional data sharing platform (DHIS2)-pilot completed in Cambodia, starting in Lao
- Intense TES monitoring through networks (GMS and beyond)

#### Coordination and governance
- Leading and supporting NSP implementation
- Malaria Programme Review completed in Vietnam Sept 2017
- Facilitate regional and partner coordination (annual forum)
- Advocacy & communication (website, newsletter)
Country progress reports
Country updates: Cambodia

- NSP: MEAF 2016 – 2020 launched
- AS-MQ introduced as first line treatment
- Delay in implementation of low dose Primaquine
- Case based pilot of surveillance completed
- Continued delays in roll out of DHIS2 based surveillance (CHAI-BMGF)
- Reported increase of malaria incidence in 6 provinces since June 2017 – currently being investigated. A reported decline in malaria in 16 provinces.

TES:
- AS-MQ 100% effectiveness (TES April 2017 ) but >20% D3 (+) in Pursat, Siem Reap, Kratie and Kg Speu
- DHA-PPQ: >60% failure in Siem Reap and Kampong Speu; 30-40% failures in Oddar Meanchey, Steung Treng and Battambang

- External Competency Assessment of Microscopists completed June 2017
- Issues relating to payments for village malaria workers resolved in August 2017
Country updates: China

- No indigenous cases reported since October 2016
- Preparations on going for subnational verification
- Elimination training in JIPD
- Third Cross border collaboration meeting between Myanmar and China completed in September 2017
- External Competency Assessment of Microscopists completed Sept 2017
Country updates: Lao People’s Democratic Republic

- NSP 2016 – 2020 launched;
- Malaria stratification completed.
- Integration of malaria data into DHIS2 completed.
- Case based surveillance to be piloted in three Northern provinces
- National slide bank established
- Low dose Primaquine for falciparum not fully implemented
- Microscopy refresher trainings completed for Northern and southern provinces
- MMFO training completed for programme managers of Central Lao
- TES studies ongoing and more provinces now reporting >10% failures to AL; preliminary results of DHA-PIP as alternative ACT in Champasak province not very promising
Country updates: Myanmar

- Launching of the national Malaria Strategic Plan, M&E plan and Malaria Elimination Plan
- Malaria Elimination training for Central and State/Regional Malaria Control Programme Staff completed in May 2017
- National Training on Management of Malaria Field operations for mid-level programme managers completed June 2017
- Following documents drafted/launched:
  - National Malaria QA/QC Manual 2017
  - Integrated Community Malaria Volunteer guideline 2017
  - Guidelines and SOPs for entomological monitoring and surveillance 2017
  - Malaria Surveillance in Elimination Settings – an operational manual 2017
  - National Malaria Reference Laboratory Strategic Plan 2017-2021
  - National Malaria Microscopy Standard Operating Procedures 2017
- Third China-Myanmar Cross Border Meetings held Sept 2017
- TES results- continued good response to ACTs
Country updates: Thailand

- **Policy:** NSP for malaria elimination (2017-2026), launched, 25 April 2016
- **Treatment:** Drug policy changed in Q2/2015 to DHA-PIP, rollout in 2016
- **Diagnostics:** establishing a national malaria reference laboratory
- **Surveillance:** near real time case based, foci registry established.
- **Human resource:** gradual shift from vertical to general health system
- **Capacity:** Cascading trainings for Malaria Elimination
- **Innovation:** piloting iDES (integrated drug efficacy surveillance)
Country updates: Viet Nam

- Cases reduced significantly
  - 4,161 confirmed cases in 2016
- Costed NSP aims for elimination by 2030
- Significant gaps in universal access to diagnosis and treatment among most at risk populations
- TES: more provinces with increasing failures to DHA-PIP confirmed by K13 and Plasmepsin2-3 mutations
- ECA of microscopists done August 2017
- Expanding resistance to ACT (PPQ) - AS+MQ introduced in Binh Phuoc and Dak Nong Province
Policy and implementation challenges

- Country ownership
- Gaps in achieving universal access to services and commodities
- Complex partners landscape requiring better coordination of efforts for impact
- Continuing evolving of drug resistance to ACTs
- Delays in rollout of policies and guidance (Updating of NTGs and Primaquine)
- Lack of understanding of elimination concept and slow progress in re-orientation, change mind-set and HR reorganizations
- Weaknesses of health systems (HR limitations, HIS, health financing, PSM)
THANK YOU