The fight against malaria in Thailand: Subnational health system and community health worker data for malaria elimination

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22nd May 2023, 34th Meeting of the RBM Partnership, SMERG
• Country Background
• Utilization of data at subnational level (provincial level)
• Community health volunteer data
Country background: National Malaria Elimination Strategy

**National Malaria Elimination Strategy, 2017-2026, Thailand**

**Targets:**
- **2024:** Thailand is free from malaria
- **2023:** Pf Elimination

**New interventions**
- Prevention of reintroduction (PoR)
- Outbreak response
- Pf elimination
- School based intervention
- People centered approach (VHVs)

**Monitoring and Evaluation**

1. **Accelerate malaria elimination**
   - Real-time notification/investigation/response (1-3-7 strategy)
   - Improving Dx and Rx at HPHs/MPs/MCs
   - Intensifying ACD
   - Increasing ITN coverage (1 net: 2 persons)
   - iDES

2. **Develop appropriate innovative measures and models**
   - Research studies
   - Application of research findings

3. **Establish national and international collaboration**
   - Enforcing national and international policies & implementation
   - Enhancing investment and resource sharing

4. **Promote community capacity building**
   - BCC
   - Community participation

**Targets:**
- **2024:** Thailand is free from malaria
- **2023:** Pf Elimination
Country background: Timeline for ME

Timeline Of Malaria Elimination, Thailand

Number of Cases

- ME Strategy (2017-2026)
- Eliminate Malaria
- Pf elimination

Fiscal Year

- 2012
- 2013
- 2014
- 2015
- 2016
- 2017
- 2018
- 2019
- 2020
- 2021
- 2022

- 2023
- 2024
Country background: Case management services

Two Streams of Case Management Services for Malaria Patients

Vertical program

Ministry of Public Health

General Health service

1. Central level
- Department of Diseases Control (DDC)
- Division of vector Borne Diseases
- Division of Epidemiology

2. Regional level
- Office of Diseases Prevention and Control (ODPC)

3. Provincial level
- Vector Borne Disease Center (VBDC)

4. District level
- Vector Borne Disease Unit (VBDU)
- Malaria Clinic (MC)
- District Health Office

5. Sub-district/village
- Malaria Post (MP)
- Village Health Volunteer (VHV)
- Health Promoting Hospital (HPH)

Reporting line

DDC administrative line

PS administrative line

Supervision and coordination line

HF that provides malaria Dx and Rx
Introduction to Malaria Program, Thailand

- Long history and strong performance of vertical malaria program services through malaria clinic (MC) since 1965
- Under Department of Disease Control (DDC), currently there are 175 malaria clinics (1 microscopist/mc) attached to Vector Borne Disease Unit (VBDU) at district level provide diagnosis with microscope, treatment, follow-up and health education.
- Vector control, entomological surveillance, malaria data entry into MIS are managed at VBDU supervised by VBDC and ODPC.
- Under PHO, there are 400 malaria posts at village level and 3,024 hospitals and HPH, provide diagnosis with RDT, treatment, follow-up and health education
Country background: National Policy Mechanism

National Policy Mechanisms to Accelerate Malaria Elimination in Thailand

- **Sustainable Development Goal Committee**
- **National Malaria Elimination Strategy Committee**
  - **National Malaria Elimination Management Committee**
  - **National Communicable Disease Committee**
    - **Technical Advisory Committee**
    - **National Accelerate Malaria Elimination Subcommittee**
      - **Provincial Communicable Disease Committee**
      - **Department of Disease Control**
      - **Office of Permanent Secretary**
      - **Implementation Unit**
        - Disease Control Operation Unit (DCDU) / Vector Control Unit (VCU)
        - Health facilities of public and private sectors, CSOs

* Communicable Disease Act B.E.2558 (A.D.2015)
** establish on Jan 2023 for outbreak management
*** only in 6 provinces along the Thai-Myanmar border
Utilization of Malaria Surveillance Data for Programmatic Actions at subnational level (Provincial level)

- **Planning & Budget allocation**
- **Area Stratification** (i.e. subnational verification, POR, MP)
- **Malaria Online Information**
- **Monitor Situation, Outbreak Detection & management**
- **Intervention Monitoring**
Subnational verification of ME: Utilization of data at provincial level
Subnational verification of malaria elimination - background

- Subnational verification of malaria elimination has been started since 2017
- Objectives for implementation of subnational verification of ME
  
  1. To verify provinces that have interrupted local malaria transmission for at least 3 consecutive years
  2. To prepare for country certification of malaria elimination in Thailand by 2027
In 2018, 35 provinces were verified using the checklist prepared by Division of Vector Borne Diseases.

In 2019, 2 provinces were verified using the structured checklist modified from WHO. (A Framework for malaria elimination)

In addition, the national malaria elimination verification committee has been established.
2020-2022, 11 provinces were verified with the adjusted tools that modified from WHO guideline. (Preparing for certification of Malaria Elimination)
• The SOP (Thai language) for subnational verification is annually revised and updated.
• Data verification workshop is organized for staff at provincial level prior to desk review and site visit by committee.
# Requirements of subnational verification of ME - Documentation

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<th><strong>SERVEILLANCE SYSTEM</strong></th>
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<td>01</td>
<td>• Smart surveillance system</td>
<td>• 1-3-7 intervention by indicators and quality</td>
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<td>• Foci Registry including completion of all interventions</td>
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<th><strong>CASE MANAGEMENT</strong></th>
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<td>02</td>
<td>• Primary care public health facilities with comprehensive services</td>
<td>• Malaria medicine inventory to prevent stockout</td>
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<td></td>
<td>• Diagnostic testing system (quality control &amp; RDT prevent stockout)</td>
<td>• Complete cure (Information of Follow up data &amp; Referral System)</td>
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<th><strong>DISEASE PREVENTION AND CONTROL COMMITTEE</strong></th>
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<td>03</td>
<td>• Orders of committees at all levels (provincial, district and subdistrict)</td>
<td>• Minutes of meetings of committees empowered to issue implement policies and guidelines on localized malaria elimination.</td>
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<th><strong>PREVENTION OF RE-ESTABLISHMENT PLANNING</strong></th>
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<td>04</td>
<td>• POR planning at Provincial levels</td>
<td>✓ risk stratification</td>
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<td>• active case finding</td>
<td>✓ preparation of reserve stock</td>
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<td>• refresher training staff</td>
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<th><strong>INTEGRATION</strong></th>
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<td>05</td>
<td>• Substantial resource mobilization and budget support from relevant entities</td>
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Process of Subnational Verification of ME, Thailand

1. DDC monitors the interruption of transmission using MIS. When data shows 3 consecutive years with zero indigenous case, PHO is officially informed.
2. PHO explores requirements for subnational verification of ME using updated SOP
3. DDC and PHO jointly confirm epidemiological data from MIS & HDC (2-days workshop)
4. PHO submits relevant documents to DDC requesting for subnational verification of ME
5. The National Malaria Elimination Verification Committee conducts desk review and site visit to the last focus
6. The Nat. committee makes final decision for the results of subnational verification of malaria elimination. An official letter is sent to PHO to inform the result
7. Certification of subnational verification is given to provinces that meet the requirements during WMD
Conclusions of subnational verification of ME-

1. Subnational verification of malaria elimination – a process that gives added momentum in achieving malaria elimination targets.

2. Thailand has set up a structured process (teams and committee) to support the verification process.

3. Prevention of re-establishment (POR) in areas where malaria transmission has been interrupted, it is needed to develop POR management plan at the provincial level.
Progress of Subnational Verification of ME, 2023

- **Over 2018-2022**: 48 provinces were verified and **46 provinces passed** the validation as malaria-free provinces (2 provinces: Phetchabun and Chon Buri did not pass the validation)
- **Six provinces with re-introduction of malaria transmission after validation**: Phuket, Chaiyaphum, Phitsanulok, Kamphaeng Phet, Lamphun, and Saraburi
- **Three provinces** will be verified in 2023: Rayong, Prachinburi, Sakon Nakhon
✓ PoR Guideline has been developed
✓ Risk Stratification for PoR adapted from WHO criteria (receptivity and importation risks) to be applied for a specific PoR package for each stata
  ▪ Active transmission: 260 subdistricts
  ▪ Non-active transmission: 272 subdistricts
  ▪ No transmission with high risk: 261 subdistricts
  ▪ No transmission with low risk: 6632 subdistricts
✓ DVBD/APLMA and UCSF implemented 2 pilot project in Nakhon Si Thummarat and Satun provinces
Measures to prevent re-establishment of malaria transmission

1. Diagnosis and treatment
2. Disease surveillance
3. Vector control
4. Preparedness of skills, materials, equipment and medical supplies
Data from community level: malaria post worker and village health volunteers (MP & VHV)
Country background: Case management services

Two Streams of Case Management Services for Malaria Patients

Vertical program

1. Central level
   - Department of Diseases Control (DDC)
     - Division of vector Borne Diseases
     - Division of Epidemiology
   - Office of Permanent Secretary (PS)

2. Regional level
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3. Provincial level
   - Vector Borne Disease Center (VBDC)

4. District level
   - Vector Borne Disease Unit (VBDU)

5. Sub-district/village
   - Malaria Clinic (MC)

General Health service

- Hospital
- District Health Office
- Provincial Health Office
- Division of Epidemiology
- Office of Permanent Secretary (PS)
- Domestic administrative line
- PS administrative line
- Supervision and coordination line
- Reporting line
- HF that provides malaria Dx and Rx
The Malaria Post (MP)

• The malaria post is established at the community level mainly located at border, remote and transmission areas and implemented by trained village-based workers or village health volunteer,

• The objectives of Malaria Posts are:
  • To reduce the malaria burden among the target population in the high transmission areas
  • To ensure maximum coverage and improved access to malaria services for both Thai and migrants and daily border crossers from neighboring countries.
Roles and Responsibilities of Malaria Post Workers

• Provide early diagnosis with RDT and prompt treatment for malaria cases with effective antimalarial drug,
• Support supervised treatment of uncomplicated malaria patients and support patient’s follow-up to ensure patients are cured,
• Provide Behavior Change communication
• Distribute long-lasting insecticide treated nets (LLINs) to non-Thai migrants who received services at MPs
Increasing coverage and accessibility of malaria services targeting population at risks

- of MPs are selected using epidemiological data, existing barriers to malaria services at other health facilities, and accessibility criteria such as distance from health facilities and transportation infrastructures
- A MP can be set-up or relocated from one village to another under a short time-frame, allowing for in a timely response using small resources

The location of MP

Malaria burden
Malaria Data from Malaria Post are included in MIS
Thank you