LLIN targeting, distribution and maintaining Universal coverage of ITN/LLIN after the departure of Global Fund in Thailand

Entomology & Vector Control Meeting, Bangkok, Thailand, November 7, 2016

Prayuth Sudathip
Malaria Elimination Section, BVBD, DDC, MoPH, Thailand
Top 5 provinces with highest confirmed malaria cases
FY 2016 (Oct 2015 - Sep 2016)

1. Tak (5,609)
2. Yala (4,752)
3. Ubon (1,342)
4. Srisaket (882)
5. Naratiwat (689)

FY 2016
17,779 Malaria cases
30% reduction

- 66% Thai and 33% Myanmar
- 72% *P. vivax* and 19% *P. falciparum*
- 68% Male
- 70% over 15 year old
- 43% imported cases

Data source: BVBD, 2 Oct 2016
Main Interventions of Malaria Elimination Strategy: (2017-2026)

- Real time notification / investigation / response (1-3-7 strategy)
- Improving Dx and Rx at HPHs (575) MPs/BMPs (352) & MCs (287)
- Intensifying PACD & RACD
- Increasing ITN coverage (1 net: 2 persons)
- Ensuring DOTs and FU
- Integrating TES into routine surveillance

2021: > 95% of districts verified for malaria interruption.
2024: Thailand to be free from Malaria

- Enforcing national and international policies & implementation
- Enhancing investment and resource sharing

- Develop appropriate innovative measures and models
- Establish national and international collaboration
- Promote community capacity building
- Real time notification / investigation / response (1-3-7 strategy)

- BCC
- Community participation

Monitoring and Evaluation
Foci Classification

Unit = village or hamlet

Reduction of Transmission

A1 = With indigenous cases at least 6 months per year
A2 = With indigenous cases less than 6 months per year (+residual non-active)

Prevention of Reintroduction

B1 = No transmission and presence of vector/suitable environment
B2 = No transmission and non presence of vector/unsuitable environment

Criteria Use:

• Cases (investigation: Indigenous/imported)
• Vector (presence/absence)
• environmental factors
Micro-stratification: villages with Malaria Transmission, FY 2014-2017

<table>
<thead>
<tr>
<th>Year</th>
<th>Transmission Villages (A)</th>
<th>At risk Population</th>
<th>Forest Goers (17% of Pop. at risk)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>5,815</td>
<td>1,531,000</td>
<td>260,270</td>
</tr>
<tr>
<td>2015</td>
<td>5,502</td>
<td>1,681,000</td>
<td>285,770</td>
</tr>
<tr>
<td>2016</td>
<td>3,621</td>
<td>1,301,776</td>
<td>221,302</td>
</tr>
<tr>
<td>2017</td>
<td>2,777</td>
<td>1,034,921</td>
<td>175,937</td>
</tr>
</tbody>
</table>

52% → 32%
VECTOR CONTROL POLICY

Active and Residual Foci (A)

1. Insecticide-treated nets (ITN)
2. Long Lasting Insecticide-treated nets (LLINs)
   • ITN+LLIN (1 LLIN /2 Persons)
3. Indoor residual spraying (IRS)
   • Focal spray

New Foci (in B area)

1. Insecticide-treated nets (ITN)
2. Long Lasting Insecticide-treated nets (LLINs)
3. Indoor residual spraying (IRS)
   • Focal spray

Forest Goers:

Long Lasting Insecticide-treated Hammock nets (LLIHNs) 1/1
# LLIN Distribution, FY 2014-2017

<table>
<thead>
<tr>
<th>Year</th>
<th>LLIN (NETS)</th>
<th>Population at risk</th>
<th>% Coverage</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>502,600</td>
<td>1,531,000</td>
<td>100%</td>
</tr>
<tr>
<td>2015</td>
<td>464,600</td>
<td>1,681,000</td>
<td>100%</td>
</tr>
<tr>
<td>2016</td>
<td>492,150</td>
<td>1,301,776</td>
<td>91%</td>
</tr>
<tr>
<td>2017</td>
<td>327,650</td>
<td>1,034,921</td>
<td>93%</td>
</tr>
</tbody>
</table>
## LLIHN Distribution, FY 2014-2017

<table>
<thead>
<tr>
<th>Year</th>
<th>LLIHN (NETS)</th>
<th>Forest Goers (17% of A1A2 Pop.)</th>
<th>% Coverage</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>52,950</td>
<td>196,005</td>
<td>27%</td>
</tr>
<tr>
<td>2015</td>
<td>57,400</td>
<td>196,633</td>
<td>29%</td>
</tr>
<tr>
<td>2016</td>
<td>137,850</td>
<td>200,539</td>
<td>69%</td>
</tr>
<tr>
<td>2017</td>
<td>170,000</td>
<td>175,937</td>
<td>97%</td>
</tr>
</tbody>
</table>
### Challenges and future plans

<table>
<thead>
<tr>
<th>Challenges</th>
<th>Future plans</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limited financing</td>
<td>▪ Advocacy to increase domestic fund&lt;br&gt;▪ Prioritized and focused investing&lt;br&gt;▪ Engagement with local organizations</td>
</tr>
<tr>
<td>Decentralization</td>
<td>▪ Internal reorganization to streamline activities managed by the national program&lt;br&gt;▪ Simplify forms/methods&lt;br&gt;▪ SOPs and Training general public health staff (SRRT)</td>
</tr>
<tr>
<td>• Retirement</td>
<td></td>
</tr>
<tr>
<td>• Unskilled staff</td>
<td></td>
</tr>
</tbody>
</table>
Challenges and future plans

<table>
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<tr>
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<th>Future plans</th>
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</thead>
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<tr>
<td>• Out door transmission</td>
<td>▪ Mapping foci using mobile technology</td>
</tr>
<tr>
<td></td>
<td>▪ Operation research</td>
</tr>
<tr>
<td>• Mobile migrant populations and cross border</td>
<td>▪ Community involvement: <strong>SOPs and training</strong></td>
</tr>
<tr>
<td>issues</td>
<td>▪ Harmonizing malaria action plan with neighboring</td>
</tr>
<tr>
<td>• Investigation and response</td>
<td>countries</td>
</tr>
<tr>
<td></td>
<td>▪ Partnership with CSOs</td>
</tr>
</tbody>
</table>
**Foci:** Identification, classification, Investigation, and Response

- Malaria positive cases form PCD/ACD
  - Case Investigation (CI)
    - Indigenous/Imported case
      - A1 A2 area
    - Imported case
      - B1 area
    - Indigenous case
      - B2 area

  - 1 day
  - 3 days
  - 7 days

- Foci Investigation (FI)
  - Case Investigation Survey (CIS)/RACD
    - 50-100 slides/10 HH around index case
    - Vector Control is routinely implemented in A1A2
  - MBS
  - Entomological survey
  - Vector control
Thank You!!