Surveillance & response as a core intervention in malaria elimination

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APMEN Surveillance & Response Work Group Meeting
Bangkok, Thailand
6-8 Sep. 2018
New malaria elimination strategy

- Global technical strategy for malaria (2016-2030)
- A framework for malaria elimination
- *Transfer surveillance & response into a core intervention*
Global technical strategy for malaria 2016–2030

**Pillar 1**
Ensure universal access to malaria prevention, diagnosis and treatment

**Pillar 2**
Accelerate efforts towards elimination and attainment of malaria-free status

**Pillar 3**
Transform malaria surveillance into a core intervention

**Supporting element 1.** Harnessing innovation and expanding research

**Supporting element 2.** Strengthening the enabling environment

New
### Differences in control & elimination phases

<table>
<thead>
<tr>
<th></th>
<th>Control</th>
<th>Elimination</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Goal</strong></td>
<td>Reduce morbidity &amp; mortality</td>
<td>Block local transmission</td>
</tr>
<tr>
<td><strong>Target</strong></td>
<td>High endemic areas/population</td>
<td>Each case &amp; foci</td>
</tr>
<tr>
<td><strong>Intervention</strong></td>
<td>Population based MDA, ITN &amp; IRS</td>
<td>Case &amp; Foci based intervention</td>
</tr>
<tr>
<td><strong>Indicator</strong></td>
<td>Coverage</td>
<td>Timeline</td>
</tr>
</tbody>
</table>
## Surveillance in control & elimination

<table>
<thead>
<tr>
<th>Control</th>
<th>Elimination</th>
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</thead>
<tbody>
<tr>
<td>A part of program</td>
<td>A key intervention</td>
</tr>
<tr>
<td>One way (low to top)</td>
<td>Two ways</td>
</tr>
<tr>
<td>less feedback</td>
<td>Feedback on time</td>
</tr>
<tr>
<td>To evaluate &amp; plan annual</td>
<td>To guide action to block transmission in foci on</td>
</tr>
<tr>
<td>control activity</td>
<td>time</td>
</tr>
<tr>
<td>Quarterly/annually data</td>
<td>Data reporting, analysis and feedback on time</td>
</tr>
<tr>
<td>analysis</td>
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</tbody>
</table>
Transfer surveillance & response as key intervention in elimination

**Pillar 1**
Case diagnosis, treatment & reporting

**Pillar 2**
Case investigation & classification

**Pillar 3**
Foci investigation & response

Supporting: 1. Laboratory testing system

Supporting: 2. Information & response system
The key point for case diagnosis, treatment & reporting

❖ Universal access to diagnosis & treatment

➢ **Laboratory test network** based on hospitals & mechanism for suspected case detection

➢ All of suspected case tested by microscopy or RDT before take anti-malaria drugs

❖ **All of confirmed case** reported on time

➢ Computer & web based **case reporting system**

➢ All of confirmed malaria case reported within 24-48h
The key point for case investigation & classification

❖ Quality control of laboratory diagnosis
➢ Malaria Reference Lab system
➢ All of reported case re-confirmed by microscopy or PCR

❖ Case investigation & classification
➢ All of confirmed case investigated on time
➢ Case classified as: Indigenous, imported, induced and intriduced case
The key point for foci investigation & response

❖ **The aims of foci investigation**
  ➢ To find more evidence for case classification
  ➢ To confirm foci with local transmission or not
  ➢ To find evidence for selected activities used for blocking transmission in foci

❖ **The activities of foci investigation**
  ➢ Epidemiological data collection
  ➢ Parasitological survey (*Re-active survey*)
  ➢ Entomological survey
The key point for foci investigation & response

❖ The aims of foci response
➢ To block foci transmission within 2 weeks
✓ Clearing parasite carrier
✓ Killing infective mosquito

❖ The activities of foci response
➢ MDA
➢ IRS or LLIN
➢ Health education and promotion
### Supporting: 1. Laboratory system

- **Laboratory diagnosis system**
  - Microscopy cover with major hospitals
  - RDT cover with clinics in rural areas
  - Case transfer mechanism with no lab clinics

- **Laboratory QA & QC mechanism**
  - Reference Lab network
  - Mechanism for quality control of malaria laboratory diagnosis
Laboratory diagnosis system

❖ Network of microscopic examination in Jiangsu

- Reference Lab
- Provincial microscopic examination Center
  - City microscopic examination station
    - District microscopic examination station
      - Township Hospital lab

1 13 107 2000
Malaria Reference Lab

--- Microscopy examination
Malaria Reference Lab
--- Molecular test (PCR)

PCR reaction

Agarose gel electrophoresis
Supporting: 2. Information & response system

❖ Case reporting system

➢ Nationwide case reporting system cover with all of hospital with lab facilities

➢ National malaria management system

❖ Mechanism for data analysis & feedback

➢ Individual case reporting & analysis every day

➢ Information feedback on time & guiding for case & foci investigation and response
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<tr>
<th>序号</th>
<th>姓名</th>
<th>性别</th>
<th>年龄</th>
<th>疾病名称</th>
<th>现住址</th>
<th>报告单位</th>
<th>类型</th>
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<td>刘家辉</td>
<td>男</td>
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Web-based malaria case management system
Malaria Data Repository

- Bulletin
  - Graphs
  - Tables
  - Maps
  - Report
  - Daily
  - Monthly
  - Quarterly
  - Annual

National HMIS or DHIS

Cases & deaths
Commodities

Malaria-specific data
- Interventions (programme data)
- Community – based Interventions
- Population at risk, groups
- Financing
- Procurement and supply
- Resistance studies
- Entomology
- HH surveys (PR, LLIN coverage)
- Other

Malaria management dashboard

Feedback
Discussion:
Transform surveillance & response as a core intervention

❖ Situation & challenges on supporting systems
- Laboratory diagnosis network
- Case reporting system

❖ Situation & challenges on key interventions
- Case diagnosis, treatment & reporting
- Case investigation & classification
- Foci investigation & response
Thanks