Report to MPAC, April 11, 2019

Malaria Elimination Oversight Committee
Background

- MPAC endorsed creation of the independent Malaria Elimination Oversight Committee (MEOC) in March 2017
  - Pillar of the 2015 GTS ‘Accelerate efforts toward elimination.’
  - Modelled after similar committees helpful in polio, onchocerciasis and dracunculiasis elimination
- The purpose of the MEOC is to assist those countries close to elimination to achieve that goal
- 10 members selected with public health, malaria or disease elimination experience
  - Mix of high-level political and technical experience
  - 2 adjunct members representing certified countries
- Meetings have been held 3 times since convening
MEOC Terms of Reference

Independent operational and programmatic advice and oversight monitoring of malaria elimination

1. Monitor and report on progress in specific countries according to established milestones and timelines
2. Provide technical advice to address programmatic or operational bottlenecks
3. Identify risks to elimination that need to be addressed
4. Share observations and recommendations with MPAC relating to WHO policies or guidance related to malaria elimination
5. Question the status quo and confront difficult issues
Indepth Review of Countries On Track for Elimination by 2020

- Too many countries at the Global Forum for indepth engagement
- Special meeting held 12-14 February 2019 with focus on 7 countries with <100 cases where extra assistance could be helpful
- Directors of Communicable or Vector-Borne Diseases invited, along with NMCP Manager and surveillance focal point
- Attended by Global Fund fund portfolio managers and monitoring and evaluation specialists
Approach

- In advance: countries prepared annual report, translated (as needed) and shared with MEOC
- Day 1: Countries presented on their progress, strategies and challenges in plenary for 30 minutes.
  - Questions were asked by MEOC and others
  - Countries were asked to prepare responses for Day 2
- Day 2: Two-hour parallel sessions with MEOC advisors, WHO and Global Fund
  - Review responses, identify bottlenecks and develop recommendations
  - Final Plenary session
- Day 3: MEOC ‘closed’ finalization of recommendations
Reduction in indigenous cases by year for 7 countries on-track for 2020

<table>
<thead>
<tr>
<th>Country</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Timor Leste</td>
<td>91</td>
<td>17</td>
<td>0</td>
</tr>
<tr>
<td>Malaysia</td>
<td>282</td>
<td>85</td>
<td>0</td>
</tr>
<tr>
<td>Suriname</td>
<td>77</td>
<td>40</td>
<td>33</td>
</tr>
<tr>
<td>Costa Rica</td>
<td>9</td>
<td>13</td>
<td>70</td>
</tr>
<tr>
<td>Belize</td>
<td>4</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>Bhutan</td>
<td>56</td>
<td>38</td>
<td>34</td>
</tr>
<tr>
<td>Cabo Verde</td>
<td>48</td>
<td>423</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>567</td>
<td>623</td>
<td>142</td>
</tr>
</tbody>
</table>

>75% reduction in Indigenous cases in the Group of 7
Improvements in 7 countries on-track for 2020

The diagram shows the number of cases for Indigenous and Other malaria over the years 2016 to 2018 for Timor-Leste, Malaysia, Cabo Verde, Suriname, Costa Rica, Belize, and Bhutan. The number of cases for each country and each year is represented by bars, with red for Indigenous and blue for Other cases.

- Timor-Leste: Slight increase from 2016 to 2018.
- Malaysia: Dramatic increase in 2016, followed by a decrease in 2017, and then stabilization in 2018.
- Cabo Verde: Steady increase from 2016 to 2018.
- Suriname: Moderate increase from 2016 to 2018.
- Costa Rica: Minimal increase from 2016 to 2018.
- Belize: Minimal increase from 2016 to 2018.
- Bhutan: Minimal increase from 2016 to 2018.

The chart is part of the World Health Organization's Global Malaria Programme.
Updates for the seven E-2020 countries on track to eliminate by 2020
Number of Confirmed malaria cases of Human Malaria

<table>
<thead>
<tr>
<th>Year</th>
<th>Indigenous</th>
<th>Imported</th>
<th>Introduced</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>91</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>2017</td>
<td>17</td>
<td>12</td>
<td>1</td>
</tr>
<tr>
<td>2018</td>
<td>0</td>
<td>7</td>
<td>1</td>
</tr>
</tbody>
</table>

- Indigenous
- Imported
- Introduced
Recommendations to Timor-Leste

- Clearly determine the origin of cases along the porous border with West Timor to differentiate introduced from indigenous cases.
- Continued improvements in collaboration and cooperation in border areas with West Timor should be actively pursued.
- Balance the current elimination efforts with enhancing the overall surveillance and response system, with a view to eventually sustaining elimination status.
- The NMCP should continue to support the private sector both in the diagnosis of malaria and in increasing the proportion of private clinics reporting malaria cases.
- Develop a financial and human resources plan for sustaining interruption of transmission after cessation of the GFATM grant.
Malaysia

Indigenous Human Malaria

- 2010: 5194
- 2011: 4164
- 2012: 2050
- 2013: 1092
- 2014: 604
- 2015: 242
- 2016: 282
- 2017: 85
- 2018: 0

Introduced

- 2010: 107
- 2011: 119
- 2012: 33
- 2013: 26
- 2014: 7
- 2015: 3
- 2016: 16
- 2017: 0
- 2018: 21

Imported Human Malaria

- 2010: 947
- 2011: 288
- 2012: 862
- 2013: 816
- 2014: 730
- 2015: 428
- 2016: 420
- 2017: 415
- 2018: 478

Zoonotic malaria (Pk)

- 2010: 509
- 2011: 854
- 2012: 1813
- 2013: 1942
- 2014: 2584
- 2015: 1640
- 2016: 1600
- 2017: 3614
- 2018: 4131

Malaria Death (number)

- 2010: 33
- 2011: 18
- 2012: 16
- 2013: 14
- 2014: 9
- 2015: 8
- 2016: 2
- 2017: 12
- 2018: 12
Recommendations to Malaysia

• *P. knowlesi* challenge needs a specific focus. Two areas for attention are:
  • development of a communications strategy for (a) target groups, (b) the general public and (c) an international audience;
  • development of a specific evidence-based strategy for *P. knowlesi* control.

• WHO should liaise with senior officials in Malaysia to support the programme, emphasizing three key areas:
  • reduce turnover of key technical support staff
  • maintain financial support for the programme;
  • upgrade the surveillance system software to fit the elimination phase.

• Increase awareness of need for malaria prophylaxis for Malaysians travelling outside the country.

• Increased strategic and coordinated cross-border collaboration

• A structured audit of the malaria programme and its components could be helpful to ensure all aspects are functioning as expected.
Cabo Verde

## Number of confirmed cases

<table>
<thead>
<tr>
<th>Year</th>
<th>Autóctono</th>
<th>Importado</th>
<th>Introducido</th>
<th>Recaída/recrudescente</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>18</td>
<td>29</td>
<td>0</td>
<td>0</td>
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<tr>
<td>2011</td>
<td>7</td>
<td>29</td>
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<tr>
<td>2013</td>
<td>22</td>
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<td>0</td>
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<tr>
<td>2014</td>
<td>26</td>
<td>20</td>
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<td>0</td>
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<tr>
<td>2015</td>
<td>7</td>
<td>21</td>
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<td>0</td>
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<tr>
<td>2016</td>
<td>47</td>
<td>28</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>2017</td>
<td>423</td>
<td>23</td>
<td>0</td>
<td>11</td>
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<tr>
<td>2018</td>
<td>2</td>
<td>18</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

Number of cases: 0-50, 50-100, 100-150, 150-200, 200-250, 250-300, 300-350, 350-400, 400-450, 450-500.
Recommendations to Cabo Verde

- The MEOC commended Cabo Verde for its response to the epidemic
- Significant political will to eliminate exists!
  - Need to translate the prevailing positive political climate into increased financing, technical improvements and all other components of the programme to ensure the sustainability of the achieved results.
- Take all necessary steps to keep the country malaria-free and put the national elimination plan into action:
  - reorient programme mindset and national strategy from control to elimination
  - establish active surveillance among migrant populations
  - establish an entomological surveillance system
  - improve human resources available at all levels of the national programme
  - ensure sustainable financing of the programme
<table>
<thead>
<tr>
<th>Year</th>
<th>Indigenous</th>
<th>Imported</th>
<th>Introduced</th>
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<tbody>
<tr>
<td>2010</td>
<td>110</td>
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<tr>
<td>2011</td>
<td>16</td>
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<td>8</td>
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<td>2016</td>
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<tr>
<td>2018</td>
<td>70</td>
<td>38</td>
<td>0</td>
</tr>
</tbody>
</table>
Recommendations to Costa Rica

- The 2018 outbreak should be documented so that lessons can be learned and similar situations prevented both in Costa Rica and other eliminating countries.
- Strengthen entomological capacity and entomological surveillance should be planned in risk areas.
- Vector control should be implemented in the areas with the greatest malarial potential.
- RDTs should be deployed to public health services, particularly in the most vulnerable areas.
- Costa Rica should continue to work in the illegal gold mining communities
  - detect and treat all cases and prevent any further introduction.
  - strengthen intersectoral collaboration with migration, security and local officers.
Recommendations to Suriname

- Given the specific challenges in Suriname with cases coming from French Guiana, the programme is urged to identify the minimal essential data on the diagnostic intake form that would allow the correct classification of cases (imported, introduced, indigenous).
- The MEOC commended Suriname for its innovative work in delivering malaria services through border posts and for the pilot project in migrant self-diagnosis and treatment (‘Malakit’) among gold miners.
- Cross-border collaboration with other neighbouring countries (Brazil and Guyana) is needed to tackle the broader issue of malaria among migrants. Improved information exchange is especially needed between the Guyanese and Surinamese programmes.
- Dependency on external funding needs to be addressed urgently to ensure sustainability.
### Number of confirmed cases of human malaria

<table>
<thead>
<tr>
<th>Year</th>
<th>Indigenous</th>
<th>Imported</th>
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<tbody>
<tr>
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<tr>
<td>2011</td>
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<tr>
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</table>
Recommendations to Belize

- Seek support from PAHO to help with advocacy for the malaria programme at the highest political levels.
- Strengthen the surveillance system (particularly passive) in a sustainable manner, including capacity strengthening of frontline health staff.
- Carry out human resource planning and development and put in place long-term personnel succession plans to ensure availability of the needed trained human resources, e.g., entomologists.
- Continue to invest in efforts to establish cross-border collaboration with Guatemala and Mexico.
- Ensure microscopy skills are maintained and a quality assurance system is in place.
- Implement clear and relevant strategies to reach the mobile and migrant population with screening and services.
Bhutan

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<td>2015</td>
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<td>2016</td>
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<td>2017</td>
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</tr>
<tr>
<td>2018</td>
<td>6</td>
<td>34</td>
<td>6</td>
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</tbody>
</table>
Recommendations to Bhutan

• Field and central level staff are insufficient for effective implementation.
  • Increase the number of field staff in border districts with India.
  • Ensure training at the central level for improved epidemiological analysis and effective use of data.
• Ensure adequate financing for staff resources and implementation of case and entomological surveillance and response in the border districts.
Overarching recommendations
• WHO should develop a structured approach to programme auditing.
• Through the Chair’s annual presentation to MPAC, the MEOC will raise the issues around zoonotic (Simian) malaria cases and elimination in Malaysia.
• WHO should develop clear and rational criteria for the classification of malaria cases (indigenous, imported, introduced, etc.) by personnel.
• WHO should advise countries when they are implementing strategies that are not recommended by WHO (e.g., using LLINs and IRS concurrently).
• The MEOC should study regional initiatives such as the Regional Malaria Elimination Initiative in Mesoamerica to understand how they support elimination.
The MEOC recognized the critical importance of GFATM resources to help achieve elimination during the ‘end game’, and made the following observations:

- Need to continue to support surveillance and response plans in countries on the verge of elimination, until certification (and beyond) while countries remain receptive and at risk of malaria importation.

- Funds could be earmarked to higher burden countries that border eliminating countries in order to reduce transmission in cross-border foci. Alternatively, these border areas might be considered and funded together as ‘special intervention zones’.

- Encourage country coordinating mechanisms (CCMs) with shared borders to enter into formal dialogue.

- Create opportunities for WHO to brief members of the Global Fund Technical Review Panel (TRP) and Technical Evaluation Reference Group (TERG) and FPMs on elimination strategies and the challenges of eliminating countries that could be better addressed in GFATM grants.

- Make catalytic and contingency fund mechanisms available on an emergency basis to rapidly address outbreaks.
Thank you!
STOP-MALARIA
Stop Transmission of Parasites of Malaria

MPAC
11 April 2019
Dr Kim Lindblade, Elimination Unit

Global Malaria Programme
World Health Organization
Challenge: Malaria Elimination’s “Last Mile”

• With malaria burden reduced, Ministries of Health refocus to other public health problems

• Complexity increased for achieving elimination:
  • Control: standardized approaches, universal coverage
  • Elimination: complex suspected case definitions, case investigations, focus investigations, response plans
  • Geo-locating of cases to direct investigations and response

• Different skill set required for elimination, but shortage of skilled staff and local capacity may impede or slow progress
Potential Model: STOP-Polio

- 20-year-old WHO-CDC collaboration, part of Global Polio Eradication Initiative
  - Currently more than 250 fellows deployed, 85% African
  - >2100 fellows in 77 countries since 1998

- Fellows on 11-month contracts trained to:
  - track acute flaccid paralysis (AFP)
  - investigate and follow-up AFP cases
  - support national immunisation days

- CDC coordinates recruitment, training and deployment

- Two-week pre-service training in Uganda

- Alumni pursue global health careers, including in malaria
Evaluation of STOP-Polio (2013)

• STOP primarily has significant impact in two areas:
  • Build long-term public health capacity
  • Fill short-term capacity gaps in polio program with direct impact on high priority activities
    – 50% on capacity filling (day-to-day operational issues) and 50% on training/coaching/mentoring
• STOPers perceived to come with high level of motivation and equipped with required technical knowledge
  • Assist in resolving operational issues while educating local staff
• Effective training programme
  • 88% said STOP had a greatly or slightly positive effect on their careers
  • 90% of STOPers joined a public health organization after their assignment (37% NGO, 34% MOH, 15% WHO/UNICEF and 14% private)
Why Launch STOP-Malaria?

• Short- and long-term benefits as per STOP-Polio

• Fellows provide focused, intense support for malaria elimination where it is needed

• Work at local level to build capacity where needs are greatest

• WHO consultant status helps operate more effectively vis-à-vis representing NGO or government

• Builds global cadre of malaria elimination experts
• Strengthen sub-national technical and operational capacity to eliminate the last foci of transmission
• WHO/CDC 2-3 week training, technical support for fellows and counterparts
• Fellows recruited from among STOP-Polio alumni
  • 250 applications received in February 2019
  • 70 applicants after screening
• Pilot in five E-2020 countries (or neighbours) close to elimination
  • Suriname, Cabo Verde, Bhutan, Pakistan (Iran), southern Africa
• Fellows on WHO non-staff, non-remuneration annual contracts, receive travel and living expenses
• Direct oversight by WHO malaria focal point with technical supervision by WHO regional elimination focal points
  • Specialized technical support from GMP and CDC
STOP-Malaria Training

• Based on new WHO malaria elimination curriculum
• 14 modules plus WHO logistics

<table>
<thead>
<tr>
<th>Rationale for elimination</th>
<th>Prevention of re-establishment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principles and goals</td>
<td>Stratification</td>
</tr>
<tr>
<td>Epidemiology and transmission dynamics</td>
<td>Innovation and research</td>
</tr>
<tr>
<td>Surveillance as an intervention</td>
<td>Management and planning</td>
</tr>
<tr>
<td>Diagnostics and case management</td>
<td>Multisectoral collaboration</td>
</tr>
<tr>
<td>Vector control</td>
<td>Community engagement</td>
</tr>
<tr>
<td>Chemoprevention</td>
<td>Certification</td>
</tr>
</tbody>
</table>

• Practical field exercises
• Additional training in leadership, communication and mentoring
STOP-Malaria Fellows’ Activities

- Pairing with local counterpart

- Conduct elimination situation analysis using tools provided by WHO/CDC

- Assist with stratification (at national and/or subnational level)

- Strengthen elimination activities through training, mentoring and direct accompaniment for case and focus investigations and development of response microplans

- Monitor and analyze progress

- Weekly activity reporting
Potential additional components

• Special recruitments for vector control and data managers

• Use of STOPers in subnational elimination in larger countries

• Deployment to support burden reduction in key provinces/districts

• Use of training platform to improve malaria control/elimination skills more broadly
Questions for MPAC

1. Suggestions for improvements to the overall concept?
2. Suggestions for implementation/operationalization to ensure objectives are met?
3. Does MPAC endorse GMP developing and leading this effort?
Thank you