Working session on next steps
Response element II: Strategic Information

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II

Strategic information to drive impact
Response element II covers 5 key areas

<table>
<thead>
<tr>
<th>Key area / output</th>
<th>Specific objective</th>
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<tbody>
<tr>
<td><strong>a National malaria data repositories:</strong> Functioning national malaria data repositories with programme tracking dashboards</td>
<td>▪ Centrally assembled and structured existing sub-national geocoded data incl. Demography, administrative data, health system, epidemiology, entomology, efficacy, commodities distribution, intervention coverage, funding (external and domestic), human resources, partnership landscape, documents library, etc.</td>
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<tr>
<td><strong>b Progress review:</strong> Country-level malaria situation analysis and review of malaria programs to understand progress and bottlenecks</td>
<td>▪ Analysis and review of malaria related data sub-nationally to understand the drivers of progress, the bottlenecks and recommendations for way forward.&lt;br&gt;▪ Note: The analysis should ideally build on the data assembled through the repository, but in some instances may be done in parallel in preparation of the NSP development.</td>
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<td><strong>c Analysis of stratification, intervention mixes and prioritization:</strong> Data analysis for stratification, optimal intervention mixes and prioritization for NSP development and implementation</td>
<td>▪ Analysis of country data to develop sub-national malaria stratification maps and optimum intervention mixes to enhance efficient targeting of resources&lt;br&gt;▪ Revision and costing of the NSP, among other considerations, based on stratification maps and intervention mixes</td>
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<td><strong>d Sub-national operational plans:</strong> Sub-national operational plans linked to sub-national health plans</td>
<td>▪ Sub-national operational plans based on the agreed reprioritization and M&amp;E framework for implementation</td>
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<td><strong>e Monitoring and evaluation:</strong> Ongoing national and sub-national monitoring and evaluation of programmatic activities (incl. data systems) and impact</td>
<td>▪ Adequate NMCP Surveillance, Monitoring and Evaluation Staff&lt;br&gt;▪ High quality malaria-related data&lt;br&gt;▪ Adequate SM&amp;E processes incl. a fully functioning SM&amp;E and operational research TWG</td>
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High Burden High Impact
Response element II, together with the other response elements, feeds into the overarching implementation process to drive impact.
1. National Malaria Data Repository - status

Consensus: meeting to discuss structure and work plan

Hosting: HMIS, other servers

Phase 1: linking with HMIS instance

Phase 2: uploading non-routine data

Phase 3: subnational installation

Phase 4: subnational training

Phase 5: sustainability mechanism (budget in grants)

Work has started in 7 HBHI countries

Expected to complete full NMDR by end of 2020
2. Progress review

**Added value**
- Detailed subnational progress review
- Impact evaluations
- Surveillance system assessments (rapid or comprehensive)

**Malaria programme reviews (MPR)**
*In progress* – DRC, Ghana, Mali, Nigeria, Niger, Uganda

**Mid term progress reviews (MTR)**
*Next two years* – Mozambique, Cameroon

**Addition epidemiological reviews**
*In progress* – Burkina Faso, Nigeria
*Planned* – India
### 3. Stratification and intervention mix analysis - context

<table>
<thead>
<tr>
<th>Country</th>
<th>Total Population 2018 (millions)</th>
<th>% Population urban 2018</th>
<th>Total population urban 2018 (millions)</th>
<th>LLIN sales 2015-2018 (millions)</th>
<th>% U5 estimated LLIN use 2018 (MAP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Burkina Faso</td>
<td>20</td>
<td>29</td>
<td>6</td>
<td>23</td>
<td>83</td>
</tr>
<tr>
<td>Cameroon</td>
<td>26</td>
<td>56</td>
<td>15</td>
<td>19</td>
<td>72</td>
</tr>
<tr>
<td>DRC</td>
<td>87</td>
<td>44</td>
<td>38</td>
<td>82</td>
<td>83</td>
</tr>
<tr>
<td>Ghana</td>
<td>30</td>
<td>56</td>
<td>17</td>
<td>36</td>
<td>69</td>
</tr>
<tr>
<td>Mali</td>
<td>20</td>
<td>42</td>
<td>8</td>
<td>16</td>
<td>66</td>
</tr>
<tr>
<td>Mozambique</td>
<td>30</td>
<td>36</td>
<td>11</td>
<td>24</td>
<td>88</td>
</tr>
<tr>
<td>Niger</td>
<td>23</td>
<td>16</td>
<td>4</td>
<td>15</td>
<td>59</td>
</tr>
<tr>
<td>Nigeria</td>
<td>201</td>
<td>50</td>
<td>101</td>
<td>89</td>
<td>51</td>
</tr>
<tr>
<td>Tanzania</td>
<td>58</td>
<td>36</td>
<td>21</td>
<td>43</td>
<td>54</td>
</tr>
<tr>
<td>Uganda</td>
<td>44</td>
<td>24</td>
<td>11</td>
<td>37</td>
<td>88</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>539</strong></td>
<td><strong>43</strong></td>
<td><strong>230</strong></td>
<td><strong>385</strong></td>
<td></td>
</tr>
</tbody>
</table>

56% of LLIN sales in sub Saharan Africa in 2016-2018
3. Stratification and intervention mix analysis - context

- Burkina
- DRC
- Ghana
- Mali
- Mozambique
- Nigeria

ITN ownership, urban vs rural
3. Stratification and intervention mix analysis - context

Under-five mortality rate (2017)

Malaria cases per 1000 pop (2017)
3. Stratification and intervention mix analysis - context

![Graph showing percentage of access to LLINs (2017) and treatment seeking for fevers, most recent survey (public sector) across different countries.]

- **Burkina Faso**: High percentage of access to LLINs (2017) and moderate treatment seeking.
- **Cameroon**: Moderate access to LLINs (2017) and low treatment seeking.
- **DRC**: High access to LLINs (2017) and moderate treatment seeking.
- **Ghana**: High access to LLINs (2017) and high treatment seeking.
- **Mali**: Moderate access to LLINs (2017) and low treatment seeking.
- **Mozambique**: High access to LLINs (2017) and high treatment seeking.
- **Niger**: Moderate access to LLINs (2017) and moderate treatment seeking.
- **Nigeria**: Low access to LLINs (2017) and low treatment seeking.
- **Tanzania**: High access to LLINs (2017) and moderate treatment seeking.
- **Uganda**: High access to LLINs (2017) and high treatment seeking.

High Burden High Impact
3. Stratification and intervention mix analysis

National Malaria Strategic Plan
(5 years, may reoriented half way)

Epidemiologic analysis

Intervention targeting

NMSP costing

Intervention prioritization

Budgeting – GF grants etc., prioritization can be done as new substantial funding become available

Geospatial analysis

Mathematical models
(optimization of intervention mixes and budgets)
3. Stratification and intervention mix analysis – Tanzania example

**Very Low**
- LLIN RCH
- LSM in foci
- IRS focus in foci
- Increase testing target
- Primaquine
- MDA (selective)
- CBS and rACD
- Epidemic resp
- IPTp
- MRC/SNP

**Low**
- LLIN RCH & MRC
  - LSM
- IRS focus in foci
- CBS and rACD in selected areas
- Epidemic resp

**Moderate & High**
- LLIN RCH
- MRC ➔ SNP
- LLIN SNP
- IRS in selected districts with highest burden
- Improve access to CM (iCCM, ADDO mRDT)
- Preventive therapies: IPTi, IPTsc
- MDA in emergency complex situation

**Urban areas / Cities**
- LLIN RCH
- LLIN commrc.
- LLIN Keep up in municipal C with high burden
- LLIN Keep up in municipal C with low burden
- LSM blanket
- Private sector CM quality improvement

_Courtesy of Tanzania NMCP_
3. Stratification and intervention mix analysis – Tanzania example

Reduction in prevalence until 2019, CM and LARV not enough to reduce prevalence but enough to maintain low prevalence until 2020. In practice ITN distribution might need to be considered in specific areas.

Reduction in prevalence until 2019, CM and LSM not enough to reduce prevalence and ITN continuous needs to be considered.

Annual ITNs maintaining coverage of 70% with increase in CM to 85% reduces the prevalence in moderate strata by 58%.

High reduction in prevalence in high strata with CM, ITNs, IRS (LAKE), IPTsc might add additional impact.

With CM and LARV only prevalence is increasing in this stratum, ITN distribution need to follow epidemiological strata to achieve decrease in all urban districts.

Courtesy of Tanzania NMCP
3. Stratification and intervention mix analysis – NSP costing

- Assembly of detailed subnational cost analysis to cost appropriately targeted interventions in NSP
- Computation of full NSP costs
- One costed NSP guiding partner support

In progress - All African HBHI countries,

Plan is to have draft outputs by December 2019
### WHO technical support materials

| **Manual for the analysis of NMCP** | To help NMCPs analyze data. Will include general principles of data to action, basic and advanced analysis (geospatial and dynamic models) and use of data for policy, strategy and implementation. Not a advanced methods book but a general guide for NMCPs. However, includes sections on stratification, intervention mix analysis and prioritization. Draft |
| **National Malaria Data Repository indicators and data elements** | A spreadsheet of indicators, data elements, definitions, sources, purpose etc. This to help NMCPs national repositories that will support analysis for policy, strategy, implementaion, reviews and global and partner reporting Advanced Draft |
| **National Malaria Data Repository DHIS2 Module** | A DHIS2 module that can be live-linked with HMIS instances as well as use customised templates to upload non routine data. Has graphic and mapping visualisation capabilities. Power BI and Tableau, where available, can be used to improve visualizations. Advanced Draft |
| **Templates for subnational data assembly** | These data templates are in excel for now but can developed in other platforms. They are designed to help NMCPs assemble the right subnational data elements, not only for data repository, but also in parallel for progress review, stratification and intervention mix analysis Advanced Draft |
| **Protocol for epidemiological progress reviews** | A protocol to support MPRs implement detailed subnational analysis. Usually MPRs are process heavy and analytically weak. Often no specific subnational recommendations. This protocol is aimed at helping countries implement subnational analysis for MPR or independently if needed. Draft |
| **Rapid Impact Assessment Protocol (using routine outpatient and inpatient data)** | A protocol for a simple time series analysis of routine data, adjusted for selected confounders, to measure progress. Previously implemented in Ghana and Rwanda. Now updated to include more guidance on sampling, sample distribution, data cleaning, management and analysis procedures. Draft |
| **Burkina Faso protocol for analysis of individual level data (from Terre des Hommes database)** | This is specific to Burkina and is aimed at analysing the TdH individual IMCI data where, for a subset of children, there is information on repeat episodes of morbidity, including confirmed malaria. Although the time window is relatively short, this large database could still provide some very useful information on patterns and seasonality of 'clinical attack rates' (data can be linked to village of origin) as well as changes over the last 4-5 years. Advanced Draft |