Planning and execution of ITN mass campaigns

CRSPC SRN meetings
2023
2022 summary – Planned campaigns

- 35 countries
- 236M planned
- 191M distributed
- 81%
Overall, access to and use of ITNs remains below the levels observed in 2017 (WMR 2022)

**ITN access**

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<tr>
<td>Households with at least one ITN</td>
<td>0</td>
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<td>Households with one ITN for every two people</td>
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<td>Population with access to an ITN</td>
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**ITN use**

- Population using an ITN
- Children aged under 5 years using an ITN
- Pregnant women sleeping under an ITN
Optimizing ITN distribution, operationalizing sub-national tailoring

• Getting the right net to the right people at the right time to **sustain access** and achieve targets (national and global)

• Shifting from blanket universal coverage approaches to more **tailored approaches** based on data will require different operational strategies (CD) and SBC

• **Improving ITN access** = moving beyond status quo of three-year campaigns and routine distribution

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*Fig. 4 Magnitude of change in insecticide-treated net (ITN) use possible from increasing use rate versus increasing access. The top row shows estimated ITN use in 2020. This second row shows what use could be if access remained unchanged and the use rate were set to 100% (left), compared to if the use rate remained unchanged and access was set to 100% (right). The final row shows the magnitude gap in use from each of these two scenarios. With few exceptions, increasing access has a larger impact than increasing the use rate.*
Consider what is effective and efficient for vector control in urban areas to rationalize resources available – use data to determine where nets are needed and decide the channel for distribution.
Over 3 billion ITNs will have been shipped to malaria-endemic countries as of Q3 2024

- Identify options for plastic waste management (private/public) for ITN baling/packaging
- Ensure appropriate waste management at the point of distribution (all channels)
- Establish policies or guidelines for net care and repair
Over 3 billion ITNs will have been shipped to malaria-endemic countries as of Q3 2024.

- Management of end-of-life nets needs to be assessed in terms of priority vis-à-vis funding and other issues (willingness to return nets, estimated volumes)
Reaching everyone

- IDPs, refugees and last-mile populations have been increasingly included in funding applications
- Need improve operations to reach these populations
- Leverage on the community health system, as well as humanitarian actors
Assessment of HHR and ITN distribution outcomes

Include cost effective and easy to use methodologies in campaign plans and budgets to assess coverage and quality of HHR and/or coverage and use of ITNs (cLQAS and small sample surveys)

- Generate and use data for decision-making

Assessment procedures using cLQAS
Digitalization – Addressing some of the challenges with quantification, coverage and efficiency
Improving data collected during household registration to improve quantification

- Use of digital tools allows for improved quality of data collection, availability of data, use of data for decision-making and feedback to campaign actors
- Integration of geospatial maps in platforms for HHR allows for identification of missed settlements for full coverage
- GPS locators for HH and information about number of people provides new information for improving quantification, both for future ITN campaigns and for other health campaign service delivery
Expanding digital platforms for data collection and use

• Rapid increase in number of countries rolling out digitalization for different campaign processes, most commonly:
  • HHR and ITN distribution
  • Supply chain
  • Supervision and monitoring
  • Training/HR management
  • Payment
• Different platforms and apps being used, but push for integration in existing systems
• End-to-end campaign systems not available, but under development
Use of geospatial maps for microplanning can improve campaign outcomes and future quantification

- EPI has seen the most use of geospatial maps for improving planning under RED/REC: Investment to strengthen RI and move away from campaigns
- Address challenges with defining administrative boundaries, missed communities
- Digital data collection during campaigns allows layering and continuous planning improvements for improved efficiency of campaigns in future
- Integration and reuse of different data points to develop geo-repositories across health campaigns

The denominator problem

Quantification challenges:

• Census data affected by time since last census, quality of census, population movement, etc.

• Use of previous HH registration data assumes all settlements and HH reached and correctly registered

• Different data sources, different numbers: challenges with triangulation

Possible solutions:

• Use of digital data collection for HH registration (GPS points), integration with geospatial maps (settlements, building footprints) could support improving quantification over time

• Improved data-sharing within MOH and beyond (integrated campaign digitalization)
Learning from EPI, establishing shared platforms
Maps for IRS/ITN Campaign Microplanning in Zambia

Population and structure count maps were created for all 116 districts in Zambia. During microplanning, District teams demarcated where they will implement IRS versus ITN interventions on these maps, ensuring sufficient resource allocation and ensuring no settlements are missed.

Burundi: Comparing paper-based and GIS microplans

- Paper-based microplanning throughout the country and geospatial microplanning piloted in two districts
- Comparison between outcomes of the two approaches
- Geospatial microplanning with campaign parameters applied (e.g. distance from distribution point) increased the number of DPs from 34 to 44 (with associated increase in personnel needed to reach the target population)

Challenges to address

• Rapid change to digitalization and approaches differ (e.g. off the shelf platforms focused on specific components vs a program-driven analysis of needs and capacities)

• “Digitalization” may not be understood in the same way across stakeholders

• Lack of IT capacity within many malaria programs, insufficient outreach to where capacity sits, late decision-making and campaign delays

• Poor data and information sharing between MOH departments and more broadly, establishment of archived geo-repositories
Digitalization is not “one size fits all”

- **Identify and prioritize** what you are trying to improve (and make sure digitalization will be a way to improve it)

- **Assess** your context and see what you have and what is feasible

- **Ensure interoperability** with existing systems when adopting a separate platform to ensure data availability post campaign

AMP digitalization tools and resources

- Digitalization decision-making matrix
- Digitalization planning and budget checklist
- Digitalization risk and mitigation example
- Resources on improving ITN campaign efficiency through the use of digital tools
WHO recommends use of pyrethroid-chlorfenapyr insecticide-treated nets to prevent malaria

Key messages:

- **Strong recommendation** for the deployment of pyrethroid-chlorfenapyr ITNs vs pyrethroid-only nets to prevent malaria in adults and children in areas where mosquitoes have become resistant to pyrethroids.

- **Conditional recommendation** for the deployment of pyrethroid-chlorfenapyr ITNs instead of pyrethroid-PBO nets to prevent malaria in adults and children in areas with pyrethroid resistance.

- **Conditional recommendation** for the deployment of pyrethroid-pyriproxyfen nets instead of pyrethroid-only nets to prevent malaria in adults and children in areas with pyrethroid resistance.

- **Conditional recommendation against** the deployment of pyrethroid-pyriproxyfen nets instead of pyrethroid-PBO nets.

https://www.who.int/news/item/14-03-2023-who-publishes-recommendations-on-two-new-types-of-insecticide-treated-nets
Guidance on the prioritization of insecticide-treated nets in situations where resources are limited

Six detailed steps to aid NMPs in implementing WHO’s recommendations on the different types of ITNs, most notably those on dual active ingredient ITNs, and is to be used specifically in conjunction with the WHO guidelines for malaria

https://www.who.int/publications/i/item/9789240069428
Raising the Floor on Nets - Overview & Updates
There are many points along the ITN lifecycle that affect net quality and performance
CHAI, I2I, BMGF, and partners have put together an initiative to strengthen ITN performance and quality across the life cycle.

**VISION:** To create a system that incentivizes continuous innovation of higher quality, higher performing ITNs.

1. **Stimulate Innovation:** Incentivize improvements to ITN quality and performance
2. **Validate Methods:** Generate consistent and useful data
3. **Maximize Performance:** Using lifecycle data to improve performance
4. **Ensure Quality:** Keeping products consistently in spec
5. **Build Trust & Use Data:** Mechanisms to communicate information more effectively
The theory of change for Raising the Floor builds upon five main pillars: stimulating innovation, validating methods, maximizing performance, ensuring quality, and building trust.

**SAVE MORE LIVES WITH BETTER ACCESS HIGH QUALITY, HIGH PERFORMING ITNS**

<table>
<thead>
<tr>
<th>OUTCOMES</th>
<th>ITN markets are more efficient</th>
<th>ITNs perform better</th>
<th>Quality &amp; innovation are incentivized</th>
<th>Global quality management systems are fit-for-purpose</th>
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<tr>
<td><strong>GUIDANCE</strong></td>
<td>Methods that generate consistent, useful data</td>
<td>Evidence to support appropriate use of products to maximize efficacy</td>
<td>Adaptable systems that reliably assure product quality</td>
<td>Mechanisms to communicate and share information effectively</td>
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<tr>
<td><strong>ACTIVITIES</strong></td>
<td>Stimulate Innovation</td>
<td>Validate Methods</td>
<td>Maximize Performance</td>
<td>Ensure Quality</td>
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<td>Identify and advocate for metrics to inform value-based procurement</td>
<td>Help develop ITN implementation guidance, testing guidelines &amp; PQ data requirements</td>
<td>Update post-market surveillance, develop storage guidance, and monitor HH behaviors</td>
<td>Develop external &amp; internal quality assessment scheme; review inspection processes</td>
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Expanding the ownership and use of mosquito nets.
These pillars aim to create a reinforcing, continuous cycle of better quality, better performing bed nets.
Raising the Floor activities are being carried forward principally by working groups and steering groups, with outputs disseminated through convenings.

**Convenings**
- **Raising the Floor**
  - Initiative-wide meeting every 12 months
  - Dissemination of programme outputs
  - Consensus on priorities
- **Country Regulator**
  - Meeting of regulatory authorities in SSA every 12 months
  - Dissemination of relevant guidance on changes to regulatory environment

**Steering Groups**
- **Implementer**
  - Country programmes, technical teams from major donors, country support organisations, modellers
  - Leverage existing VC Taskforce
  - Topics: value-based, context-relevant procurement model, using data at higher resolution operation units, supporting investment decisions to maximise impact
- **Quality**
  - QA teams of major donors (LQAG)
  - Topics: complaints and resolution processes, PQ auditing/inspection process, external quality assessment scheme
- **Industry**
  - ITN manufacturers (existing I2I industry workstream)
  - Topics: harmonised labelling, post-market surveillance, partners programme

**Working Groups**
- **Methods**
  - Research orgs, technical experts, implementing orgs, industry, PQT
  - Identify priority methods to validate
  - Assign task-and-finish groups to validate methods
- **Data**
  - Implementing orgs, country programmes, industry, donor quality teams
  - Identify implement solutions to increase access to data on ITN quality and performance
A key early area of focus is on post-market data collection (PMDC), where there are gaps in guidance, measurement, and implementation, affecting ability to use data for decisions.

**ITN post-market data collection (PMDC):**

Activities to track the performance of net products in the field, including measuring physical integrity, bioefficacy, and use.

**PMDC data serves multiple purposes across stakeholders**
- **Countries:** understand how different products perform in different entomological contexts, preferences for products, etc., which can inform decisions on product choice and placement.
- **Manufacturers:** inform refinements or corrective adjustments to current products in response to field performance; feed into innovation for new products.
- **Regulators:** inform prequalification of products and guidelines on appropriate use and deployment of different products.
- **Procurers:** determine which products are best suited for various contexts.

**Lack of guidance and piecemeal implementation affects interpretation**
- No formal, consolidated guidance detailing what should be collected for PMM.
- Piecemeal collection: considerable resources being allocated by different stakeholders collecting different information, making it difficult to compare.
- Challenges interpreting the data - i.e. how to discern between signals and trends.
- Interpretation challenges make it difficult to respond appropriately.

**In 2023, Raising the Floor has convened a post market monitoring working group**
- Includes partners from different stakeholder groups to meet regularly to identify and execute a pathway forward to revamp PMDC.
The PMDC working group has three main objectives to increase the value coming from post-market data:

1. **Identify post-market data needs and decision points for major stakeholder groups (Countries, procurers, manufacturers, WHO PQ & GMP)**
   - Which decisions need to be made?
   - Is the current data relevant to making those decisions?
   - Would other data be more useful?
   - Can this data be collected more flexibly and cheaply?

2. **Discuss and recommend data sources and collection approaches for ITN field monitoring and funding sources**
   - Based on the landscape of data needed, how can we improve data collection and coordination?
   - What data is appropriate to share with broader stakeholders, recognizing that greater transparency can lead to better products and implementation?

3. **Identify data management and sharing tools, and discuss interpretation needs**
   - Given data needs and coordination opportunities, what data systems are needed to efficiently manage and share information?
   - How can we improve data interpretation and use?
From March-May 2023, CHAI and I2I conducted listening exercises with key stakeholder groups to better understand post-market data needs and gaps.

**Objective**

- Identify post-market data needs and decision points for major stakeholder groups (countries/country support, procurers, manufacturers, WHO)

**Results**

**Common Themes:**
- The need for guidance on post-market data collection
- Need for data integration was referenced by two country partners and manufacturers
- Issue of cost and lack of resources for PMDC

**Themes by Group:**
- **QA/QC Group**: Would like standardization and alignment with PQ
- **Implementers**: Concerned with logistics of collecting DM data within constraints
- **Manufacturers**: Would like knowledge of how data will be used. Would like industry- and PQ-endorsed guidelines
- **Countries**: Ownership and involvement in post shipment testing and data collection. Calls for increased granularity of data and for guidance

**Recommendations**

1. A strategy to undertake optimized DM within the budgetary constraints
2. Integrated, data-shared approach
3. Greater country involvement (design, data collection and ownership)
4. Durability monitoring to include behavioral data
For more information or questions, please reach out to Angus, Anna, or Tara

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