Uganda case study: distributing ITNs during the COVID-19 pandemic

I. SUMMARY

Key enabling factors for continuing the mass campaign during the COVID-19 pandemic

- **High-level political will** from the President, Permanent Secretary and Minister of Health to have malaria interventions fast-tracked as a way of mitigating the potential increased risk for the population of co-infection with COVID-19.
- **Authorization to run public health messages other than COVID-19** at the time of potential suspension of activities that were not COVID-19 related. Co-messaging was used linking malaria and COVID-19. Visual messaging on television and broadcast media such as radios were used.
- **Leveraging on the success of COVID-19 communication efforts** to reach most parts of the country with malaria messages.
- **Messages from the highest levels** that malaria campaigns and responses to COVID-19 are complementary and mutually beneficial in reaching the population at the same time; social and behaviour change (SBC) played a big role in this area. Officials like the Minister of Health and Assistant Commissioner were seen to lead the SBC campaign.
- **Procurement of additional ITNs by the** Against Malaria Foundation (AMF) to respond to anticipated ITN gaps and ensure achievement of universal coverage targets. The funding of an extra 1.4 million ITNs from AMF (whose funding is tied directly to ITN procurement and monitoring costs) freed up part of the Global Fund financial resources for procurement of PPE.
- **Timely availability of funding and approvals for accelerated procurement** from the Global Fund to ensure sufficient operational costs for the additional ITNs procured by AMF, as well as to ensure timely availability of personal protective equipment (PPE) for campaign workers.
- **Commitment and support from the National Coordination Committee and all stakeholders** to have the campaign proceed and maintain the joint momentum of malaria campaign activities with COVID-19 prevention measures.
- **The initial few reported cases of COVID-19**, with most being imported rather than through community transmission, led to a fast decision to have the campaign move forward as planned, but with COVID-19 adaptations.
- **Flexibility to respond to unforeseen needs** allowing for deployment of ITNs earlier to areas most affected by heavy rains and flooding and realignment of the distribution timeline accordingly.
- **Building on lessons learned** and improving quality as the campaign continues has been possible since the campaign will roll out in five separate Waves targeting different parts of the country. Wave 1 revealed some challenges that improved visibly in Wave 2,

especially development of SOPs for more standard implementation quality and improved ITN security and accountability.

Achievements

- Rapid deployment of ITNs during the lockdown period to market vendors who were unable to travel home and would therefore be exposed to malaria while sleeping outdoors, unable to access and use existing ITNs in their households.
- Securing the additional ITNs and operational costs ensured that enough ITNs were in place during district distribution given the adapted campaign strategy, which did not include a separate phase for household registration to define actual ITN needs in each targeted area.
- Supply and use of PPE, such as gloves, masks, hand sanitizer and aprons to all community agents (village health teams [VHTs] and Data Entry Clerks [DECs]).
- Organization of face-to-face training while observing Standard Operating Procedures (SOPs) for preventing COVID-19 based on experiences and challenges with use of virtual platforms.

Lessons learned in Wave 1 and solutions applied in Wave 2

- To meet COVID-19 guidelines, it was proposed to implement registration and distribution simultaneously. However, not having data in advance of the door-to-door distribution, in addition to the lack of a clear, funded transport and security plan, made this impractical and created the potential for ITN leakage with no mechanism for knowing the ITN needs or tracking ITNs between households.
  Solution: *Registration was conducted door-to-door in the morning and distribution door-to-door in the afternoon, or registration in the afternoon and distribution the following morning. This helped reduce ITN leakage in Wave 2.*
- While virtual trainings (mainly via Zoom) were proposed to help reduce physical contact, they proved ineffective as a learning mechanism mainly in Wave 1. Field staff could not demonstrate a thorough ability to transfer skills and implement some of the SOPs during registration and distribution.
  Solution: *A change from virtual to face-to-face training was implemented while observing COVID-19 guidelines. This action greatly improved many aspects of the ITN campaign. Nevertheless, as shown in the photo below, proper usage of masks and physical distancing needs to be reinforced in future Waves.*
- Resupplying pre-positioning sites each day does not maximize time and money compared with pre-positioning ITNs close to communities during the distribution period.
  Solution: *A change was made to include a logistics officer at the pre-positioning site, as well as security, to ensure availability and timely supply of ITNs to distribution teams. This reduced the number of days required for the distribution, which led to savings to cover other activities.*

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II. CONTEXT

THE REVISED STRATEGY

Household registration and ITN distribution

With the onset of the COVID-19 pandemic and the risk of the campaign not being carried out on time for ensuring coverage before the rainy season, the National Malaria Control Division (NMCD) convened all partners to look at the options for ITN campaigns within the restrictions in place for limiting transmission and exposure to the disease. Guidance from WHO and AMP was used to generate discussion and achieve consensus among partners.

The main considerations for planning the ITN distribution were limiting household contacts and avoiding bringing groups of people together, both of which were part of the original campaign strategy (household registration as a first phase to identify ITN needs and distribution of ITNs from fixed sites after pre-positioning based on the registration data). The NMCD modified the strategy to a single-phase combining the household registration and the ITN distribution in one door-to-door visit to each targeted household. During the first days of implementation of this strategy, it was noted that there were insufficient security and logistics in place to manage the resupply of teams and have high ITN accountability. In an effort to have better data regarding ITN needs for the door-to-door distribution, the NMCD altered the strategy to have registration being conducted door-to-door much earlier in the morning to determine the ITN needs for the day's targeted households and the door-to-door distribution later in the day. In some cases, registration took place in the afternoon with the distribution being organized the following morning. In all cases, COVID-19 infection prevention measures were emphasized and prioritized during supervision and monitoring visits. No signatures for receipt of ITNs were mandated due to concerns about COVID-19 transmission risks with exchange of materials and difficulty adhering to physical distancing.

However, some did not adhere to the infection prevention measures including wearing masks, as shown in the photo below.

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Coordination

Performance review meetings were held every day at 19:30H through Zoom where all district supervisors and stakeholders participated in giving feedback on operations and the other challenges of the day for possible mitigation in advance of the next day's activities. There were at least four to five staff deployed per district, including Ministry of Health and partner staff, to ensure monitoring of the implementation of activities including COVID-19 guidelines, such as physical distancing. Using Zoom was a COVID-19 adaptation as in the past, performance reviews were held at district level and in person. The results were mixed as internet connectivity was uneven in some districts. For Wave 2 it was decided to revert back to face-to-face meetings wherever possible at district level and then communicate outcomes to the central level coordination team.

Procurement of ITNs, PPE and other commodities

With the increased global demand for PPE, it was at first not possible to procure enough PPE to allow the campaign to commence. However, government support enabled masks, gumboots and gloves to be manufactured locally. These were used by the VHTs during registration and distribution. A total of 500,000 masks were manufactured per day with a final total of 34 million. These were supplied for the campaign activities first and then provided to communities.

With the additional 1.4 million ITNs donated by AMF and funding from the Global Fund, the NMCD was able to procure additional PPE such as aprons with hand covers, gum boots and hand sanitizer.

Microplanning

Before COVID-19, household registration was carried out to inform pre-positioning of ITNs at district and sub-county levels. Given the COVID-19 pandemic, microplanning data (based on sub-county information from health facilities) were used instead to pre-position the ITNs. This

required the need to strengthen microplanning, which previously was done at a more centralized level (county), to ensure greater accuracy when defining population numbers and ITN quantities. The microplanning component is still under review for future campaign Waves given challenges with over and under supply during the campaign implementation, but will most likely involve village heads collecting the information about their communities and then verifying that information is correct during sub-county meetings with NMCD staff and campaign personnel.

Communication

COVID-19 messages were integrated into all SBC messages, especially those communicated during the door-to-door registration and ITN distribution through interpersonal communication (IPC) while respecting physical distancing and use of masks. Key messages were given to VHTs as part of their standard operating procedures to ensure that they were consistent, clear and correct and avoided any problems with miscommunication due to lack of understanding given challenges with ensuring high-quality training.

Uganda's ITN campaign involves the distribution of different net types in different parts of the country to respond to documented insecticide resistance. The NMCD took a decision that only people within the Ministry of Health structure would be provided with details about the different ITN types, while communities were informed only that there were different nets based on the level of insecticide resistance.

Visibility of the campaign was achieved through various channels and activities, including radio, television and social media. It is planned that the President, along with key stakeholders, will in due course front an official launch of the campaign virtually on national TV.

Training

During Wave 1, training was carried out virtually through the Zoom application. However, this was not effective enough to ensure that trainees grasped the required skills and necessary SOPs to implement all of the activities for the Wave at the quality required to ensure good data and ITN accountability. In Wave 2, face-to-face training was carried out at all levels, allowing for role play exercises to be used to assess understanding of training content and adherence to COVID-19 infection prevention during implementation of activities, as well as a better assessment of learning outcomes. Based on training performance and learning outcomes, trainees that would require additional support during the initial days of implementation were identified and targeted for supportive supervision.

Logistics

ITNs are delivered to Uganda from the port in Mombasa. With the onset of the COVID-19 pandemic, African countries including Uganda rapidly initiated COVID-19 testing for transporters crossing borders to minimize risks of widespread transmission given the number of contacts transporters have as part of their work. Delayed ITN arrival was seen at the start of the pandemic due to insufficient COVID-19 tests, slow availability of results, etc.

Logistics arrangements remained largely the same as in previous campaigns other than the last-mile logistics, which were changed to align to a door-to-door strategy. During

implementation of the door-to-door distribution, it was noted that daily resupply to pre-positioning sites and to distribution teams was creating a bottleneck when they were served from the county stores. A decision was taken to add logistics personnel and security at sub-county stores, allowing the ITNs to be stored safely and securely during the entire distribution period (4—5 days).

Pre-positioning of ITNs was based on microplanning data and over and under supply of ITNs were noted. These over and under supply problems may be addressed through improved microplanning for future Waves, while the separation of the household registration in the morning from the ITN distribution in the afternoon ensures more accurate data for ITNs required for each day of distribution. Based on the final distribution and ITN reconciliation data, NMCD undertook reverse logistics and redistributed nets where needed.

Supply chain data were captured electronically, and Wave 2 showed improvements in the data systems.

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Data collection

Data were captured electronically through the Electronic Data Management System (EDMIS) and also through the Collaborative Communication Management Information System (CCMIS) which captures all other data including supervision. This limited the movement of paper between locations. Data collection forms were reviewed prior to the campaign with all partners and the information to be collected was significantly reduced to ensure that limited time was required at each household to reduce potential transmission of and exposure to COVID-19. Minimum data points to ensure accountability for the ITNs were retained for the campaign.

For the household registration and ITN distribution, data entry clerks were part of every team to ensure high quality data were collected at each household and transmitted to the electronic database in a timely manner. Due to COVID-19, the data entry clerks used their own smartphones rather than having the NMCD procure them separately. The electronic data collection had some problems in Wave 1 that were improved in Wave 2. Continuing to

improve electronic data collection and storage and reduce paper-based methods will help improve data quality for future Waves.

Supervision and monitoring

Monitoring agents (PACE [hired by AMF], Health Monitoring Unit and Edes Associates – the Fiduciary Assurance Agent) are supporting all Waves and are prioritizing maintenance of and adherence to COVID-19 infection prevention measures, such as physical distancing, proper use of masks and regular handwashing. COVID-19 questions and indicators have been included in the monitoring framework and information from reports is reviewed during the daily review meetings and incorporated in plans for improvement during the next day's work. Lessons are compiled for reviewing and adapting implementation approaches for subsequent waves. Also, NMCD staff provided cluster level supervisors for all districts and other field-based staff comprised of District Supervisors, Sub-county Supervisors, two M&E Assistants and Data Assistants; approximately four to five staff per district depending on the size of the district.

Waste management

ITNs procured for the campaign do not have individual packages in an effort to reduce waste. Masks procured for the campaign were fabric and reusable, but other material procured (such as sanitizer bottles, gloves, etc.) generated waste. After each Wave of the campaign, district managers are responsible to collect all waste generated through the campaign and bring it to the central level for incineration using the vehicle they have been assigned for supervision. Empty bale sacks were counted to verify the number of ITNs distributed.

Post-distribution review meetings

In addition to the daily review meetings that took place during the implementation of the household registration and ITN distribution, final review meetings were held in each sub-county to get feedback from stakeholders, to capture lessons learned and to develop recommendations for subsequent Waves.

Payments

All payments were done electronically through mobile money by KPMG (the procurement and financial management agent). The payments were initiated only after confirming who was to be assigned payment. Further, the change to mobile money was implemented as cash could be a source of COVID-19 transmission. There were some challenges with mobile money due to connectivity issues and also capacity issues at the bank. In some cases, people were unclear how to receive the funds, or their phones were registered in a different name. No signatures for payment were mandated due to concerns that paper could be a source of COVID-19 transmission.

Budget implications

At this time, the COVID adaptations have led to a reduction in the overall budget, but as the campaign has several Waves to cover the country, a more accurate assessment of cost implications will take place in 2021. Final numbers in terms of savings and cost drivers will be known at the end of 2020 for the first Waves and for the whole campaign in the second quarter of 2021.