

Mass distribution of long lasting insecticidal nets during COVID-19

Lessons learnt from South Sudan

Key learning

- Mass distribution campaigns can be delivered effectively during pandemics with the support of strong guidelines.
- In South Sudan, social and behaviour change (SBC) activities are successful in disrupting entrenched health behaviours, which hinder the adoption of transmission prevention guidelines.
- Community engagement and training are essential to the successful delivery of long lasting insecticidal nets (LLINs) in pandemic contexts.

Background

In South Sudan, malaria is estimated to account for 47 percent of outpatient visits and remains the leading cause of mortality and morbidity.^[1] While the majority of the population is at risk of contracting the disease due to limited practice of preventive behaviours — such as consistent use of LLINs — pregnant women and children under five are most susceptible.

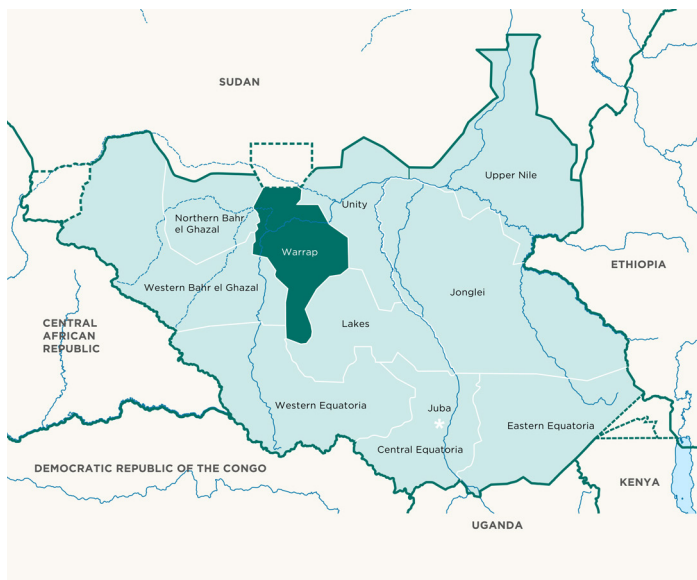
The Ministry of Health (MoH) and non-governmental partners have, therefore, intensified efforts to combat malaria over the last several years. Most notably, they have implemented preventive and control interventions that include health promotion, intermittent presumptive treatment for malaria in pregnancy, indoor residual spraying, and LLIN distribution and use. LLINs are now among the most widespread and cost-effective malaria prevention methods used in South Sudan, able to reduce uncomplicated malaria episodes by up to 50 percent in high transmission areas, and childhood mortality by up to 25 percent.^[1]

However, the emergence of COVID-19 threatened to jeopardise these and other global health gains by interrupting essential services and placing communities living in vulnerable circumstances at risk. This prompted a review of the global LLIN distribution methodology in line with guidance from the World Health Organization and the Alliance for Malaria Prevention to ensure continued safe and effective LLIN delivery during the pandemic.

Project activities and results

The project [Scaling Up for Universal Coverage and Impact](#), funded by the Global Fund to Fight AIDS, Tuberculosis and Malaria — through Population Services International (PSI) — supports LLIN distribution across South Sudan. To ensure that these life-saving resources reached recipients in Warrap state between July and September 2020 — despite the considerable challenges COVID-19 posed — we implemented a range of timely and context-specific adaptations and

Mass campaign implementation site, South Sudan



amplified our community engagement and SBC activities. Adaptations centred on physical distancing, preventive health behaviours and limiting large gatherings.

To ensure the safety of net distribution teams and the communities they work with, we:

- trained 2,344 volunteers (selected by community leaders) on COVID-19 preventive measures, such as handwashing with soap, using masks and hand sanitiser, and safe distancing
- limited LLIN volunteer training to one session per day, comprising maximum 20 attendees
- distributed nets door-to-door rather than from fixed sites, which are usually congested
- introduced the cleaning/disinfecting of surfaces and equipment/materials in use during trainings and LLIN distribution
- limited eligibility to volunteer, excluding those at high risk of contracting COVID-19 or serious infection, such as older people and those with health conditions
- trained campaign workers on how to identify and report suspected cases COVID-19 infection, for follow up by the MoH.

We additionally facilitated campaign launch meetings at state and county level — attended by MoH officials, security staff, and local leaders — and conducted a logistics assessment to determine population sizes and identify *boma* (village) stores for net storage. PSI delivered nets to the respective counties, while we supported their transfer to the *boma* stores.

Despite intercommunal conflicts in Tonj East, changes in political administrative structures and flooding, we managed to reach a total of 347,373 households (and a population of 1.8 million people) with 877,311 LLINs using the adapted methodology.



Pregnant women and children in South Sudan are particularly susceptible to malaria infection

Lessons learnt

- Malaria programming, such as mass LLIN distribution, can be implemented effectively during pandemics, provided robust guidelines are in place to prevent community transmission. These include handwashing with soap, using hand sanitiser, disinfecting surfaces, maintaining social distancing, and identifying symptomatic individuals and reporting cases to the MoH.
- With adequate protective equipment and training — and appropriate oversight and supervision — volunteers can successfully deliver LLINs door-to-door. Supervisors were trained in two teams: site managers enforced volunteers' adherence to guidelines; while supervising registrars recorded successful LLIN delivery by marking households with chalk and issuing them with vouchers. This limited contact with households and made it easier to verify whether LLINs had reached their intended recipients.
- Door-to-door distribution is a practicable, albeit resource-intensive, alternative to distributing from congested, fixed sites during a pandemic. This strategy obviated the need for in-person registration, limiting physical contact between volunteers and households. Volunteers instead assigned and delivered one net to every two people, capped at a maximum of three nets per household. Pre-allocating LLINs had the additional benefit of ensuring that we achieved 100 percent household coverage in target areas.
- Despite efforts to conduct logistics assessments to determine population size, population estimation remains a challenge.

Without access to reliable data, community leaders' figures are often underestimated, while local authorities and volunteers sometimes inflate estimates, and the LLIN surplus is misappropriated. To address this dual challenge, we collated data from community leaders, the National Bureau of Statistics and from *payam* (the second lowest administrative unit) and county departments. These averages enabled us to provide coverage in areas where populations had been underestimated.

- We implemented several SBC activities, which included promoting awareness messages about COVID-19 and the LLIN campaign via radio, posters and pamphlets, and community mobilisers using megaphones. While these methods proved successful, we found that the most effective way to disrupt entrenched health-related norms and behaviours — which hinder the adoption of transmission prevention guidelines — was by observing preventive practices among respected individuals in the community. Seeing volunteers' adherence over time normalised this behaviour, encouraging community members to do the same.
- Community participation in LLIN campaigns is crucial to their success, especially in pandemic contexts. Community leaders coordinated weekly meetings, in which volunteers and household members were able to address campaign-related challenges, report on campaign progress, and review and plan activities. This feedback allowed *payam* supervisors to respond to problems on site, such as lack of adherence to guidelines and nets being stolen.

Recommendations

Recommendations for implementers and distribution teams in South Sudan:

1. LLIN campaigns should be conducted during the **dry season**, when all areas are accessible. This will reduce both the time required for campaign delivery and the cost of distributing LLINs to communities.
2. Adequate time should be allocated to consultations and **population verification** before the start of a campaign. This will allow for more realistic population estimates, which will, in turn, facilitate more efficient and comprehensive household coverage. In pandemic contexts, this is of particular importance, given the need to reduce contact between households and volunteers.
3. Campaign planning should facilitate the unimpeded **movement of payam supervisors**, given the large geographical area they cover during door-to-door distribution, to ensure adherence to COVID-19 measures among volunteers,
4. While **door-to-door campaigning** reduces the potential for community transmission of COVID-19, it is both expensive and time-consuming. This strategy should be used in limited circumstances, where normal distribution methods are not possible.
5. Communities should **increase their volunteer numbers** in pandemic contexts, to be able to cover eligible households targeted for net distribution. In light of the current transmission prevention guidelines — and the great distances volunteers must travel — household visits should be limited to 10 per day to ensure the safety of all parties.
6. **Comprehensive security assessments** that include early conflict indicators must be conducted in operation areas before LLINs are delivered. This will ensure the safety of staff and equipment for the duration of the campaign.

Reference

1. MoH South Sudan. Annual HMIS report 2017.

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Cover image: A woman hangs a bed net — one of the most effective malaria prevention methods in South Sudan.

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