



# Long-Lasting Insecticidal Net Distribution Campaigns

## ► Introduction

The Guyana Ministry of Health (MOH) adopted the use of long-lasting insecticidal nets (LLINs) as its major malaria control strategy. The National Malaria Strategic Plan 2020–2025 outlines implementation of this strategy through mass distribution of free LLINs every three years to at-risk populations in the four malaria-endemic hinterland regions (Regions 1, 7, 8, and 9) and parts of Region 10. During its LLIN mass distribution campaign in 2018, the MOH distributed 91,000 LLINs to Regions 1, 7, 8, and 9 and then conducted a post-campaign survey in 2019. The survey results revealed that 70% of households received an LLIN, and more importantly, 65% of households had sufficient nets to meet their needs. However, reaching the miners with sufficient LLINs was more challenging. The 2019 MOH and 2019 Breakthrough ACTION surveys respectively found that only 34% of miners received an LLIN distributed by the MOH and only 39% reported owning an LLIN. The Breakthrough ACTION survey in 2019 also found that 55% of miners believed that LLINs can prevent malaria; however, 38% found sleeping under an LLIN uncomfortable due to the smell, 35% found sleeping under an LLIN uncomfortably hot, and 7% of household heads thought sleeping under a net was uncomfortable. Breakthrough ACTION provided social and behavior change (SBC) support to the MOH's 2021 and 2024 LLIN distribution campaigns based on these findings.



## ► Interventions

The LLIN mass distribution campaigns aimed to increase access to and use of LLINs by at-risk populations, including miners and community members, in Regions, 1, 7, 8, and 9 and parts of Region 10. The campaign's specific objectives were to increase the proportion of the intended audience who:

- Felt that they are at risk of malaria infection, and that malaria infection is a serious problem.
- Felt that they can protect themselves and others by sleeping under an LLIN every night.
- Knew why it is important to consistently use and properly care for their LLINs.
- Felt confident in their ability to obtain, use, and care for an LLIN.
- Obtained and encouraged others to obtain their LLINs.
- Slept under their LLIN every night.
- Cared for their LLIN according to the instructions.

Breakthrough ACTION collaborated with the Vector Control Services (VCS) National Malaria Programme (NMP), the Public Relations/Health Promotion Unit (PR/HPU), and an advertising agency to develop a creative brief for the SBC campaigns, as well as print, radio, television, and social media content to support campaign objectives. The campaigns were divided into three phases: pre-distribution, distribution, and post-distribution.



Dr. Frank Anthony, Minister of Health (center), U.S. Ambassador Nicole Theriot, to the Minister's immediate left, Erika Venegas, USAID Infectious Disease Advisor on the Ambassador's left, Dr. Reza Niles-Robin, Director, VCS and other PAHO/WHO and regional officials display samples of the nets that were donated by the U.S. Government at the launch of the LLIN distribution in 2024.

**Pre-distribution interventions** focused on when and where the distributions would take place in the respective regions and how community members could pre-register for their LLINs. Breakthrough ACTION developed social media posts and a radio spot that provided information about the locations and dates of the distribution and the documents that miners and residents would need to register to receive an LLIN.



**Distribution interventions** provided specific information about distribution locations, how to use and care for the LLIN, and where to go if persons missed the distribution. SBC materials in this phase included social media content, posters, an LLIN use and care brochure, a television spot and radio spot on how to use and care for the LLIN, and a "Sorry we missed you" leaflet that could be left at anyone's home who was not present for the distribution and instructions on how they could access an LLIN at a later date.



**Post-distribution interventions** were a combination of SBC materials that focused on the "do's" and "don'ts" of using and caring for LLINs. The project developed social media posts with influencers from the endemic regions to address various issues of using and caring for LLINs. The radio and television spots that aired during the distribution were also aired during the post-distribution phase since they contained appropriate information on the use and care of the LLINs.



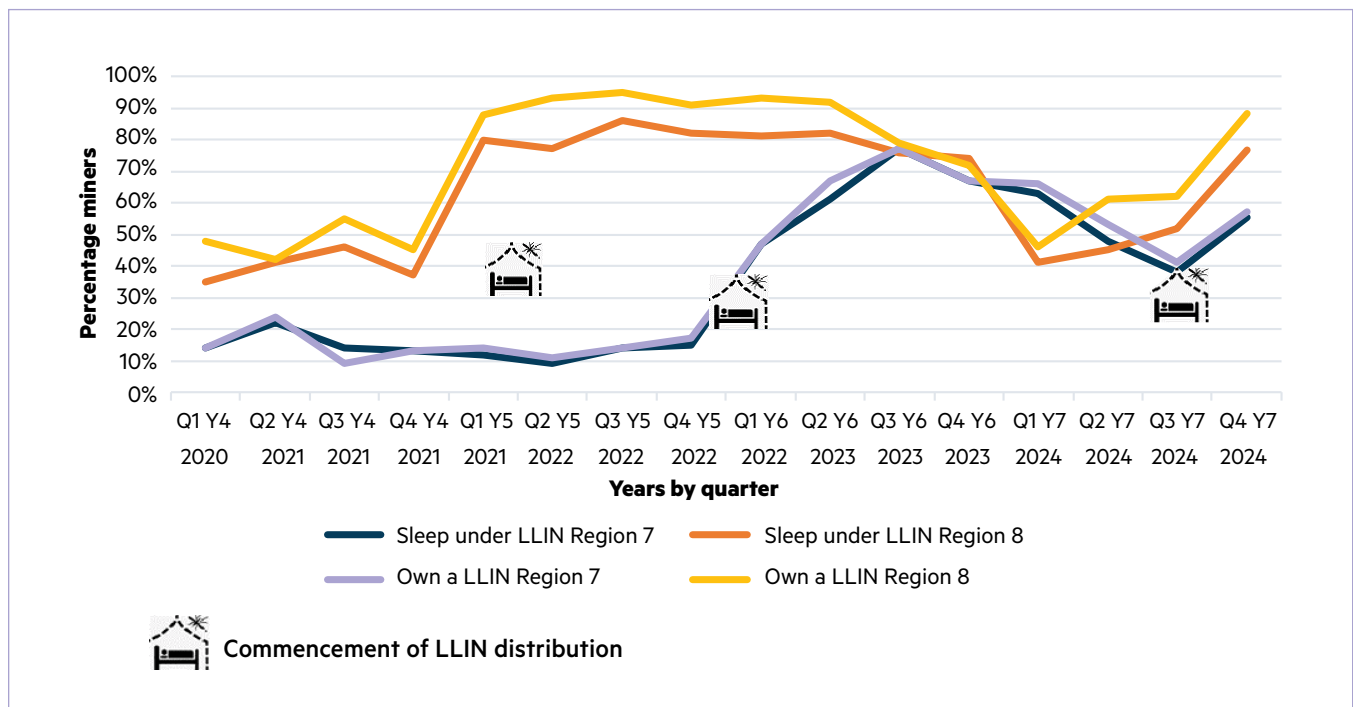
## Results

### Continuous Monitoring Data

Data from Breakthrough ACTION's continuous monitoring forms from 2020 to 2024 illustrates increases in LLIN use and access associated with LLIN distributions (see Figure 1). Region 8 had a sharp increase in access and use during the mass LLIN distribution campaign in Year 5. LLIN access predictably plateaued for Region 8 in 2022 after the LLIN distribution and then began to decline in 2023. This decline is likely attributable to the time that elapsed since the last LLIN mass distribution, leading to a diminished accessibility to LLINs, particularly as some miners left the region and new ones entered. Region 7 had low rates of LLIN access and use until Quarter 4 of Year 5 when there was a significant uptick, aligning with assistance in LLIN distribution by the private sector. As with Region 8, LLIN access and use dropped off in Region 7 in 2023 following the distribution. Both regions begin to increase again at the end of 2024, coinciding with the next mass LLIN distribution campaign.

The data also illustrates a strong correlation between LLIN use and access in both regions. LLIN use closely tracks access over the course of the project, even as access fluctuates. This finding indicates that there is a strong habit of LLIN use among miners who have access to an LLIN, and that use rates would be expected to increase when LLIN access is improved. The findings also reveal that there is a notable disparity in both the ownership and usage of LLINs between Regions 7 and 8. These differences are likely at least partly due to the geographic differences between the regions; Region 7 is much larger and more dispersed, and LLIN distributions thus face logistical challenges.

**Figure 1: Ownership and Use of LLINs by Miners in Regions 7 and Region 8**



### Evaluation Data

Breakthrough ACTION also conducted a rigorous mixed-methods, theory-based evaluation of the project to assess the reach and behavioral impact of its SBC activities. Cross-sectional quantitative surveys conducted in 2019 and 2022, respectively, measured key results from the project's two primary interventions: (a) the LMBP campaign and (b) support to the volunteer malaria tester program. Data showed that ownership of an LLIN among miners increased from 41% in 2019 to 48% in 2022 ( $P \leq 0.05$ ), and five LLIN-related ideational factors showed statistically significant improvement from pre- to post-intervention:

- Miners reporting knowledge of ways to prevent malaria increased from 35% to 39% (P ≤ 0.05).
- Miners who reported discussing malaria prevention with others increased from 18% to 22% (P ≤ 0.05).
- Miners who stated they know where to get a free LLIN if they need one increased from 65% to 71% (P ≤ 0.001).
- Miners who perceived other miners as owning an LLIN increased from 48% to 61% (P ≤ 0.001).
- Miners who believed that LLINs are effective for preventing malaria increased from 59% to 72% (P ≤ 0.001).

After controlling for miners’ socio-demographics and their mining context, miners with higher ideation scores were 1.4 times more likely to use LLINs (P ≤ 0.001).

## ▶ Lessons Learned

- **Enhanced collaboration between VCS/NMP and the PR/HPU was instrumental in strengthening the SBC aspects of the 2024 LLIN distribution campaign.**

VCS/NMP and the PR/HPU collaborated with Breakthrough ACTION from the inception of the project. Both benefited from “learning by doing” approaches in every aspect of LLIN distribution campaign design, implementation, and monitoring. VCS/NMP and the PR/HPU also jointly participated in several SBC-related meetings in which the two sides discussed VCS/NMP’s SBC needs for the campaign and how the PR/HPU could support those needs. This support included scripting short messages about the campaign, conducting interviews with key VCS/NMP staff about the campaign, and using the MOH’s social media platforms to promote the LLIN distribution campaign. Strengthening the collaboration between VCS/NMP and the PR/HPU on future LLIN distributions in all phases of the process has the potential to contribute to the PAHO/WHO recommended goal of 80% LLIN coverage in the target communities. Their collective experiences can also be channeled to support SBC functions in other health areas of VCS, such as filaria and neglected infectious diseases.

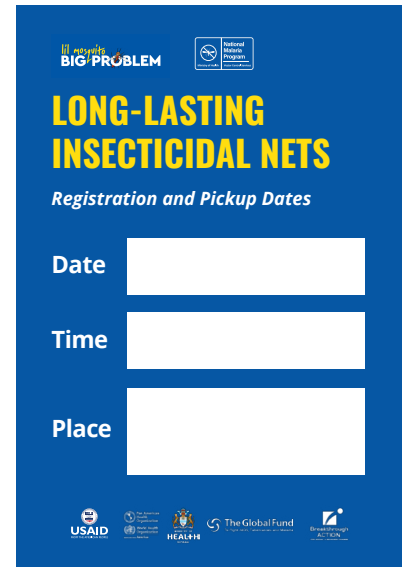
- **Phased LLIN distributions require nimble SBC approaches.** One of the benefits of using a phased pre-distribution, distribution, post-distribution approach is that it provides key SBC messages to the intended audience at each stage of the distribution process and reduces the possibility of overwhelming the audience with too much information on the distribution continuum. However, different regions—and even different areas within the same region—were not on the same distribution schedule, and distribution schedules were frequently subject to change, given fluctuations in LLIN and distribution personnel availability, unpredictable rainy season conditions, and other logistical and environmental considerations. Successfully implementing a staggered LLIN distribution required nimble SBC approaches that could quickly adapt to a sometimes rapidly changing environment and at each phase of the distribution process. Breakthrough ACTION found that channels such as live interviews, DJ mentions, adaptable social media posts, and customizable posters were more effective for communicating variable, time-dependent information such as distribution dates, whereas pre-recorded radio or TV spots could be used to communicate universally relevant content, such as how to care for one’s net or the importance of sleeping under an LLIN all year round. Breakthrough ACTION successfully leveraged its SBC experience to provide critical support to NMP in developing and executing its LLIN distribution mandate.





- Engaging community-based organizations and influencers can contribute to improved LLIN distribution.** Prior to the launch of the 2024 LLIN distribution exercise, VCS/NMP spent a significant amount of time and other resources to engage community-based organizations and influencers on the upcoming LLIN distribution campaign. For instance, VCS/NMP staff, supported by community health workers, were deployed to various areas in malaria endemic regions to update residents about the pending distribution. An immediate outcome from the signing of the memorandum of cooperation between three government agencies and two umbrella mining organizations was support from the mining organizations to the MOH for the distribution of more than 46,000 LLINs to various mining communities. Engaged community-based organizations and influencers have demonstrated that they can support improved LLIN distribution. This engagement can be expanded to schools and religious leaders/institutions.

- A complementary continuous LLIN distribution strategy, reinforced through SBC, would help maintain optimal LLIN coverage.** Since many miners work seasonally and migrate in or out of the regions, newly arriving miners may have trouble getting LLINs upon arrival, contributing to a decline in access and use. Though LLINs are meant to remain with the mines and not with the miners, this is often not the case in practice. A shift in VCS/NMP's strategy to include a continuous LLIN distribution component would help fill coverage gaps between mass distributions, especially if employed in malaria-prone areas. This change in the approach would also require concerted SBC support to ensure it is communicated appropriately to the intended audience.



This brief is made possible by the generous support of the American people through the United States Agency for International Development (USAID). The contents are the responsibility of Breakthrough ACTION and do not necessarily reflect the views of USAID or the United States Government.