

# Sierra Leone MBS Results Brief

## What Do the Data Mean?

### Introduction

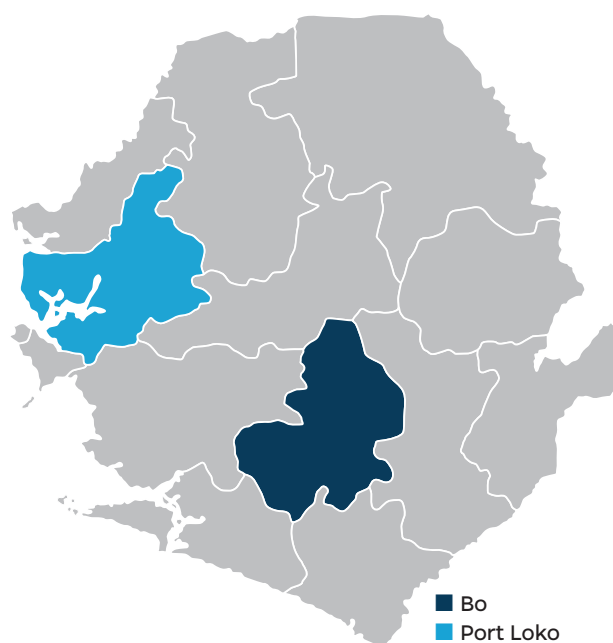
With funding from the U.S. President's Malaria Initiative, the Breakthrough ACTION project, managed by the Johns Hopkins Center for Communication Programs, collaborated with the Sierra Leone Ministry of Health and Sanitation and the National Malaria Control Program to implement a Malaria Behavior Survey (MBS) on the psychosocial determinants of malaria-related behaviors from a representative sample of households. The study, fielded during the 2019 rainy season (September–October 2019), used a cross-sectional survey with structured questionnaires administered to a random sample of women (15–49 years old) and men (18–59 years old) of reproductive age.

The goal of this study was twofold: to provide a better understanding of the sociodemographic and ideational characteristics associated with malaria-related behavioral outcomes in Sierra Leone and to determine the appropriate focus of social and behavior change (SBC) programmatic activities.

### What do the data mean?

For each intervention area, this MBS results brief summarizes the key implications and recommendations for SBC activities informed by the factors measured in the survey. Statistically significant correlations from a multiple-regression analysis, when available and appropriate, form the basis of most recommendations. Regression results are reported by district when statistically significant. The full and detailed results of the MBS can be found in the Sierra Leone [MBS Survey Report](#).

### Sierra Leone MBS Study Zones



Breakthrough ACTION collected information from:



**2,003  
households**

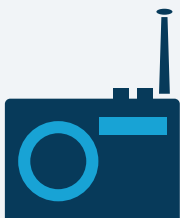


**3,836 individual  
respondents**  
3,209 women,  
and 627 men.



# Media Habits and Channels

## AT-A-GLANCE



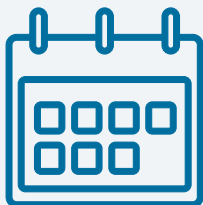
**74%**

of those surveyed reported **access to a radio** (73% of urban respondents versus 58% rural).



**More men than women** reported weekly radio listenership

Men **74%** Women **52%**



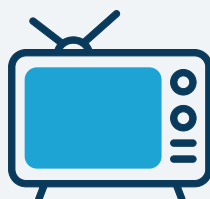
Men **older than 45 years** old and those with a **secondary or higher education** were the most likely to listen to the radio at least weekly.



Bo  
**64%**

Port Loko  
**61%**

Port Loko and Bo had similar **weekly radio listenership rates**



**20%**

of those surveyed reported **watching television weekly**, equally for men and women, while **50% of urban respondents** reported weekly viewing versus only **8% of rural respondents**.



For both men and women and in both districts, **Community Health Workers** were the most common source of malaria messages.



Community Health Workers (**62%**) and radio (**60%**) were the most frequently cited sources of exposure to malaria messages, with friends and family (**45%**) and government healthcare facilities (**39%**) also cited as sources.

# Insecticide-Treated Nets

## BEHAVIORS AT-A-GLANCE

The **use:access** ratio indicates the ratio of people who slept under an insecticide-treated net (ITN) the previous night (use) among the population who could have slept under a net, assuming each net in the household provides access for up to two people (access).

### ITN Use:Access ratio:

<b>Bo</b>	<b>Port Loko</b>
<b>1.1</b>	<b>1.2</b>

The use:access ratio was greater than **1.0** in both districts (**1.1** in Bo and **1.2** in Port Loko). A net use:access ratio greater than **1.0** is a good indication that individuals with sufficient access to nets within their household used them.

### Net use within households that own at least one ITN:

Men: **69%**  
 Women: **75%**  
 Children under 5 years: **83%**  
 Children 5-17 years old: **60%**  
 18 or older: **78%**



### ITN care in the household:



<b>Bo</b>	<b>Port Loko</b>
<b>77%</b>	<b>63%</b>

Of nets were found suspended and tied up\* to minimize damage

<b>Bo</b>	<b>Port Loko</b>
<b>21%</b>	<b>32%</b>

Of nets were found suspended, not tied up and vulnerable to damage

<b>Bo</b>	<b>Port Loko</b>
<b>0.1%</b>	<b>2%</b>

Of nets were found unpacked, but stored away



<b>Bo</b>	<b>Port Loko</b>
<b>66%</b>	<b>71%</b>

Washed with bar soap\*



<b>Bo</b>	<b>Port Loko</b>
<b>9%</b>	<b>7%</b>

Dried in the shade\*

\* Recommended behavior



## SBC RECOMMENDATIONS

**1 CHALLENGE:** Although almost three-quarters of sampled households had at least one ITN, substantially fewer households (17% overall; 13% in Port Loko) had at least one ITN for every two household members. In other words, less than a fifth of households had adequate access to ITNs. Access to ITNs is closely related to the proportion of household members sleeping under an ITN. Social and behavior change (SBC) approaches need to focus on access to help people attain enough nets for their household. To address this, SBC activities should:

- **Promote households acquiring enough nets through public distribution systems to reduce the proportion of the population without access to nets.** Given the heavy reliance on public distribution systems for access to ITNs (which provided **99%** of ITNs), the use of SBC

to increase access should be focused on encouraging household registration, showing up to distribution points (mass campaigns accounted for **70%** of ITNs), attending antenatal care (ANC) (accounting for **24%** of ITNs), and routine immunization (accounting for **4%** of ITNs) to obtain ITNs. This can be achieved by ensuring clear and actionable communication about household registration and the time and location of distribution points or routine channels.

- **Enable all households to receive enough nets.** Every additional person in the household led to a **5%** decrease in the odds of consistent ITN use by survey respondents. The likelihood of using a net consistently increased by **80%** for every additional net in the household. More nets should be distributed to ensure universal access is achieved.

**2 CHALLENGE:** There is room to improve net care: 70% of nets were found tied up over the sleeping space (63% in Port Loko) and 70% of ITNs are washed with bar soap (67% in Bo). Only 8% of nets were dried correctly in the shade. While there is a strong culture of net use when people have enough nets, net care represents an opportunity for SBC to improve net longevity. To address this, SBC activities should:

- **Promote appropriate net care before, during, and after mass distributions.** SBC materials and messages that provide clear guidance on appropriate net care should be included in distribution campaign activities and continue after distributions end to reinforce consistent net care behaviors. Net care behaviors to be promoted include tying up nets when not in use, washing infrequently and only with bar soap and water, and drying them in the shade after washing.
- **Address key audiences with net care messaging. Several sociodemographic groups were significantly correlated with appropriate care of a net when it was not in use.** Respondents from Port Loko district were **53%** less likely to report tying up a net when not in use compared to those from Bo district, and those residing in urban areas were **two times** more likely than their rural counterparts to do so. Respondents with primary education only were **62%** more likely to perform this behavior compared to those with no education. While net care SBC is important for all groups, special emphasis can be placed on reaching people in Port Loko, rural populations, and those without formal education with activities developed for and pre-tested with them.

**3 CHALLENGE:** For maximum effectiveness, net use needs to be a habit. Participants were asked if they used a net every night of the week. There is a need for improvement in consistent net use (62% overall, 55% in Port Loko). To address this, SBC activities should:

- **Increase self-efficacy to correctly use ITNs to increase use.** Perceived confidence to use an ITN was strongly associated with consistent ITN use; in Bo, people with this perceived self-efficacy were almost nine times more likely to use ITNs every night. To increase self-efficacy, demonstrate how easy or desirable it is to use nets every night. Modeling net use can be done with people with whom community members identify, as well as positive deviants, community theater, or role playing. Community health workers can increase self-efficacy of people by assisting households who have not hung their nets to do so, and then encouraging them that using a net every night is feasible.
- **Increase perception of net use as a norm. Use of mosquito nets as a perceived community norm was associated with use of ITNs every night in both districts.** People in Bo who perceived mosquito net use as a norm in their community were more than **twice as likely** to use an ITN every night; in Port Loko they were **1.68 times as likely**. Community health workers can reinforce this norm during their outreach, framing net use as a socially desirable and common behavior.

# Antenatal Care and Intermittent Preventive Treatment During Pregnancy

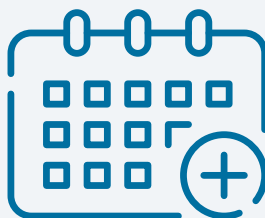
## BEHAVIORS AT-A-GLANCE

Of the 1,066 women surveyed who reported a pregnancy during the two years preceding the survey:



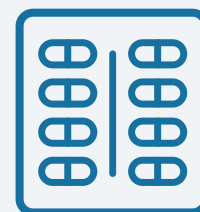
Bo  
**100%**  
reported attending at least one  
antenatal care (ANC) visit

Port Loko  
**96%**



Bo  
**95%**  
reported attendance at four or more  
ANC visits (national recommendation)

Port Loko  
**88%**



Bo  
**64%**  
reported receiving at least three doses  
of intermittent preventive treatment  
during pregnancy (IPTp)

Port Loko  
**57%**



## SBC RECOMMENDATIONS

**1 CHALLENGE:** Women lacking knowledge of the recommended number of doses of IPTp are less likely to have received at least three doses of IPTp during their last pregnancy. To address this, social and behavior change (SBC) activities should:

- **Coordinate messages about the appropriate number of doses with reproductive health departments, technical working groups, and implementing partners who are providing facility-based quality improvements.** Women with knowledge of the recommended number of doses of IPTp were almost three times as likely to have received at least three doses of IPTp during their last pregnancy. Half or less of the surveyed women (**50%** in the survey, **44%** in Bo) knew that women should receive at least three doses of IPTp.
- **Increase knowledge of the importance of early ANC.** Only **61%** of women (**59%** in Port Loko) knew that pregnant women should seek consultation in the first trimester or as soon as they know they are pregnant.

**2 CHALLENGE:** More highly educated women are not receiving the required IPTp doses. To address this, SBC activities should:

- **Specifically address women with higher education and messages should be pre-tested with these women to make sure messages are effective.** Women with a primary school education were **32%** less likely and women with secondary or higher education were **38%** less likely than women without education to receive three doses of IPTp. Women with higher education were also less likely to know that women should have at least four ANC visits during pregnancy.
- **Ensure private facilities and pharmacies are providing appropriate guidance and access to IPTp.** Literate women tend to use private facilities and pharmacies, so these facilities should be prioritized for SBC interventions to ensure the providers there are advising patients correctly on IPTp.

**3 CHALLENGE: Knowledge that pregnant women should have at least four ANC visits during pregnancy was lower in Port Loko than in Bo. SBC activities should:**

- **Increase knowledge on the correct number of ANC visits across demographic groups in Port Loko.** Knowledge of the recommendation for at least four ANC visits was lower in Port Loko (**51%**) than in Bo (**70%**) across demographic categories: gender, educational attainment, and urban or rural residence.

**4 CHALLENGE: Shared decision-making regarding ANC attendance was low among pregnant women's spouses. To address this, SBC activities should:**

- **Emphasize the importance of male involvement in ANC and communication between spouses regarding ANC.** Interventions can promote inter-spousal dialogue about malaria. Fewer than one-half (**45%**) of women who had given birth in the past two years indicated that the final decision on their ANC attendance was made jointly with their spouse or partner. This was especially low in Port Loko (**35%**).
- **Build on existing men's self-efficacy to support their partners to attend ANC.** Most men (**93%**) said they had the self-efficacy to encourage their spouse or partner to go for a checkup as soon as they suspect they are pregnant. SBC programs should continue to encourage this. One approach that may be helpful is working to increase men's knowledge that women should attend at least four ANC visits during pregnancy, as this was much lower in men than in women (**45%** vs. **77%**), and it was especially low in Port Loko (**26%**).

**5 CHALLENGE: Women and men in both districts lack knowledge on the severity of malaria for pregnant women. To address this, SBC activities should:**

- **Increase risk perception across community members, which can prompt more women to access the correct number of IPTp doses.** Only **56%** of women (**53%** in Bo) knew that pregnant women are more likely to die from malaria than non-pregnant women, and less than one-half of men knew this.

**6 CHALLENGE: There is room for improvement with women's attitudes towards ANC and IPTp. To address this, SBC activities should:**

- **Correct misinformation leading to women's negative attitudes towards aspects of ANC and IPTp.** Only **68%** of women had overall positive attitudes towards ANC and IPTp. For example, only **15%** of women think IPTp is okay for a pregnant woman to take on an empty stomach, and **47%** of women think a woman should wait a few months before seeing a health provider when she thinks she may be pregnant.
- **Reinforce the existing positive attitudes women have towards ANC and IPTp.** Over **90%** of women and men believed the medicine given to pregnant women to prevent malaria keeps the mother healthy and works to protect the unborn baby from the effects of malaria. Additionally, **76%** of women felt that obtaining more than four ANC visits is a community norm.

# Malaria Case Management

## BEHAVIORS AT-A-GLANCE

Of the 307 caregivers (out of those who had a child under five years old in their home) with a fever in the previous two weeks surveyed:



**81.5%**

of caregivers with a febrile child sought care the same day or next



Bo  
**13%**

of caregivers had children under five years of age with fever within the two weeks prior to the survey

Port Loko  
**14%**



Bo  
**96%**

of caregivers who brought their febrile child to a health center received a malaria diagnostic test

Port Loko  
**84%**



Bo  
**35%**

of children who tested positive for malaria received artemisinin-based combination therapy (ACT)

Port Loko  
**51%**



## SBC RECOMMENDATIONS

**1 CHALLENGE:** Not all caregivers promptly seek care at a health facility for children with fever (same/next day). To address this, social and behavior change (SBC) activities should:

- **Promote SBC materials that build individual self-efficacy.** Those caregivers with self-efficacy—the belief that they were able to bring their febrile children promptly to the health facility—were over **four times** more likely to have sought care quickly.
- **Promote Community Health Workers (CHWs) as a resource that is able to treat malaria.** 87% of respondents reported that CHWs know how to treat malaria in children (compared to 93% in health facilities), so this confidence should be leveraged, and SBC should increase knowledge of this resource.
- **Build positive attitudes about prompt care-seeking.** Those with positive attitudes about prompt care-seeking were more likely to have brought their febrile child for proper malaria diagnosis and treatment than those who did not have positive attitudes about prompt care-seeking. This was especially true in Port Loko, where caregivers with positive attitudes about prompt care-seeking were **four times** more likely to have brought

their febrile children promptly to health facilities. Overall, having positive attitudes about prompt-care seeking was associated with a **3.5 times** greater likelihood to have brought their febrile child promptly to health facilities for care.

- **Promote spousal dialogue about malaria.** Respondents who reported speaking with their spouse about malaria were nearly **three times** more likely to seek care promptly than those who had not. This is particularly true in Bo, where they were **seven times** more likely than those who had not.
- **Ensure adequate focus of SBC activities for care seeking in urban areas.** Those living in urban areas were **one-third less likely** to have brought their feverish children under five for prompt malaria testing and treatment than those living in rural areas. This disparity may have several causes: results may be a testament to the success of increased program focus in rural Sierra Leone, and/or they may reflect that urban areas have more opportunities to self-treat using a pharmacy or alternative treatments. An increased focus on urban areas with messages encouraging care-seeking at clinics should close this gap between urban and rural areas.

**2 CHALLENGE: Some health care providers do not abide by the national malaria treatment guidelines. To address this, SBC activities should:**

- **Ensure consistent ACT supply in health facilities and regularly communicate those stock levels and ensure supportive supervision of providers responsible for malaria testing and treatment.** Although most children with a fever were brought to a health facility promptly, of those who test positive for malaria, only **35%** in Bo and **51%** in Port Loko actually received ACT. Overall, less than one-quarter of respondents (**22%**) perceived that the medicine to treat malaria was always available at the health facility (Bo **26%**, Port Loko **17%**). The model used by PMI in Outreach Training and Supportive Supervision Plus+ could be built on to improve malaria case management by providers through coaching and mentoring. Better data use for decision-making and coordination between national and district level will be needed to improve stock.
- **Convey very clearly to community members the costs surrounding malaria testing and treatment and recourse for those who are unfairly charged.** Although the vast majority of respondents (**92%** in both Bo and Port Loko) have positive attitudes towards health workers, significant proportions (**40%** in Bo and **40%** in Port Loko) believe that health workers make community members pay for medicine for malaria in children.