

Liberia MBS Brief

What Do the Data Mean?

INTRODUCTION

The National Malaria Control Program (NMCP) continues to strategize effective malaria control interventions in Liberia, where malaria remains a major public health concern. With funding from the U.S. President's Malaria Initiative and technical support from the Breakthrough ACTION project led by Johns Hopkins Center for Communication Programs, the NMCP and other stakeholders implemented a Malaria Behavior Survey (MBS) to examine the psychosocial factors that influence malaria-related behaviors. The NMCP and Breakthrough ACTION conducted the MBS in three of the six health regions of Liberia, which they selected based on level of malaria endemicity. The three regions surveyed are Greater Monrovia (low Plasmodium falciparum parasite rate [PfPR]: 1–10%), South Central (moderate PfPR: 10–35%), and North Central (high PfPR: ≥35%). Survey data collection occurred from November 15, 2021 to March 14, 2022. The MBS was cross-sectional and used structured questionnaires administered to a random sample of 4,677 women (15–49 years old) and 1,145 men (18–59 years old) of reproductive age from 3,719 households. The analysis involved bivariate and multiple logistic regression to test the associations between psychosocial determinants and behaviors.

The Liberia MBS had two main objectives: (1) to better understand the sociodemographic and psychosocial characteristics (as described by the Ideation Model of Behavior Change) associated with malaria-related behavioral outcomes, and (2) to determine the appropriate focus of social and behavior change (SBC) activities in Liberia.

WHAT IS THE PURPOSE OF THIS MBS BRIEF?

This MBS brief summarizes the proportion of the population in Liberia practicing a variety of recommended malaria-related behaviors and their associated demographic and psychosocial factors. The brief also uses results from the MBS to present recommendations for SBC programs for each of the malaria intervention areas. A complete report is available on the [MBS website](#).

Key behavioral results from the MBS are summarized for malaria case management, insecticide-treated net (ITN) use, malaria in pregnancy (antenatal care [ANC] and intermittent preventive treatment during pregnancy [IPTp]), and media habits and channels. Results are disaggregated by region where appropriate. Additional SBC recommendations can be found in the [Liberia National Malaria Social and Behavior Change Strategy 2021–2025](#).

Proportion of Sampled Households, by Region



Malaria Case Management

BEHAVIORS AT-A-GLANCE

Among caregivers of children under five years of age who had a fever within the two-week period before the administration of the survey (n = 2,391):



86%

of individuals sought advice or treatment for fever from a health provider.



94%

of individuals knew to seek treatment for their child the same day as, or the day after the onset of fever (i.e., prompt care).



The proportion who sought care and testing promptly at a health facility who lived:

- Near a facility: **55%**¹
- Not near a facility: **54%**²

70%

of individuals sought care for fever promptly for their child

- Greater Monrovia (72%)
- South Central (59%)
- North Central (71%)

66%

of individuals first sought care for their child from a health facility or community health assistant (CHA).



SBC RECOMMENDATIONS

1 CHALLENGE: Although 94% of respondents knew to seek care promptly for a child with fever, 30% of caregivers whose child had had a fever did not seek care the same day or next day. This indicates a need for improved prompt care-seeking behaviors. To address this, SBC activities should:

- **Identify and address barriers to prompt care-seeking.** Although almost all respondents (94%) reported that they knew the importance of prompt care-seeking for a child with fever, only 70% of caregivers whose child had recently had a fever sought care the same or next day. Furthermore, prompt care-seeking for fever did not vary based on proximity to a health facility (54–55%) and demonstrated substantial room for improvement of this behavior. Respondents who knew the importance of seeking care promptly were **eight times more likely** (adjusted odds ratio [aOR]: 8; 95% confidence interval [CI]: 3.0–21.3) to report that they took a sick child for

prompt and appropriate care within the past two weeks compared to other caregivers with a sick child who did not know the importance of seeking care promptly. Knowing what appropriate care is (aOR = 3.1; 95% CI: 1.2–7.9) and perceiving that the care is effective (aOR = 1.7; 95% CI: 1.1–2.6) were also associated with promptly taking a child with fever for care. SBC recommendations that increase knowledge about prompt care-seeking for fever, including that it may save lives, can encourage individuals to seek care promptly from a health facility or a CHA. This in turn potentially will improve outcomes for timely use of health providers for fever case management. SBC interventions that increase community awareness about when to seek care, promote visibility of CHAs, and educate the public about health worker roles in providing malaria prevention and care services may be helpful; appropriate channels for this include mass media and interpersonal communication via community health days and health talks in facilities.

¹ Near to a facility is defined as located five kilometers or less from the facility, less than 30 minutes by walking, or less than 10 minutes by driving.

² Not near to a facility is defined as located more than five kilometers from the facility, or more than 30 minutes by walking, or more than 10 minutes by driving.

- **Increase supportive norms for prompt care-seeking for fever from a health provider (at a health facility) or from a CHA (in the community).** Only 34% of respondents believed members of their community seek care promptly for fever from a health provider, and only 9% of respondents felt that other community members expected them (the respondent) to promptly seek care for a child with fever, from a health provider. Amplifying influential community voices—such as those of radio announcers, community leaders, members of parent-teacher associations, and personnel with the National Community Health Program (e.g., community health services supervisors, CHAs, Health Facility Development Committee members)—could further harmonize SBC and support positive community norms related to care-seeking.
- **Identify and address barriers to prompt treatment with artemisinin-based combination therapies (ACT) for children with confirmed malaria.** Less than half (48%) of caregivers of children with confirmed malaria reported that their child received ACT the same or next day after care was sought (i.e., promptly). A human-centered design activity where community members and providers participate in co-creating solutions for improving prompt access to ACT may increase acceptance of and motivation for adopting the expected behaviors. In addition, SBC materials highlighting access to ACT from only government-approved sources, such as registered pharmacies and medicine stores, and with prescriptions from qualified providers may also improve timely receipt of recommended treatment. Where drug stockouts are common, local advocacy and training of prescribers can ensure better stock maintenance. Tracking stockouts through electronic systems could serve as a proxy for tracking prompt access to ACT.
- **Promote seeking care for fever from CHAs.** Only 1% of respondents sought care from CHAs. A high number of respondents (81%) had positive attitudes toward CHAs. Programs should include interventions that leverage community members' positive perceptions of CHAs to encourage increased reliance on CHAs for care, as this will improve prompt treatment of malaria.

2 CHALLENGE: Only 57% of respondents identified a blood test as the best way to test for malaria, and 75% identified ACT as the effective treatment for malaria. To improve this, SBC activities should promote the use of quality ACT by linking communities to approved access points during stockout periods, such as registered pharmacies and medicine stores. Under the Healthy Life campaign, malaria-related SBC should include information that encourages communities to seek and use quality assured ACT from approved access points. SBC materials should also promote that both the malaria test and ACT are available through CHAs.

- **Improve correct, comprehensive knowledge about malaria testing and treatment.** 75% of respondents identified ACT as the effective treatment for malaria, and 57% identified a blood test as the best way to test for malaria, showing room for improvement in knowledge. Key channels that implementers may leverage to operationalize this include radio messaging and community engagement—including community dialogue and promotion by community leaders and CHAs—that educate and reinforce information about malaria testing and treatment.
- **Increase perceived response efficacy of clients for both the malaria blood test and use of ACT for treatment of malaria.** The methods for testing and treating malaria need more promotion among respondents as the most optimal methods of testing for and treating malaria. Those who perceived malaria testing and treatment as effective were 1.7 times more likely (95% CI: 1.1–2.6) to seek prompt and appropriate care for fever in children under five years of age in the past two weeks, compared to those who did not perceive malaria testing and treatment as effective. A potential strategy to increase perceived response efficacy for malaria testing and treatment among community members may be using community champions to share their experiences and testimonials about the value of malaria testing and treatment via radio, social media, and to conduct community engagement such as dialogues and town hall meetings that include sharing of positive personal experiences with malaria testing and treatment by community champions. Clients also need to know they can get ACT from CHAs, and the above-mentioned channels are ideal for this as well.

Insecticide-Treated Nets

BEHAVIORS AT-A-GLANCE



Net access and use

Net ownership and use by household members the night before the survey:

66% of households owned at least one ITN.

- Greater Monrovia (50%)
- South Central (50%)
- North Central (76%)

78% of respondents with sufficient access to ITNs (use:access ratio), used ITNs the night preceding the study.

- Greater Monrovia (78%)
- South Central (86%)
- North Central (78%)

51% of individuals surveyed had access to a net (access refers to the availability of one ITN for every two individuals in the household).

- Greater Monrovia (28%)
- South Central (36%)
- North Central (61%)

89% of the nets found in households were ITNs.

93% of nets in households were free program nets.



Consistent use of nets

72%

of individuals reported use of an ITN or untreated net each night of the week (i.e., consistent net use).

40%

of individuals reported using an ITN the night before the survey.

- Greater Monrovia (22%)
- South Central (31%)
- North Central (48%)

70%

of individuals reported that ITNs can prevent malaria.

- Greater Monrovia (63%)
- South Central (76%)
- North Central (71%)



Net care

74% of respondents cared for their ITNs by rolling or tying it up when not in use.

38% of ITNs were washed with harmful materials during their last wash.

37% of ITNs were dried outdoors in the sun after their last wash.



SBC RECOMMENDATIONS

1 **78% of those with access to ITNs used them the night before the survey. While high, this still leaves room to build on and increase daily use of ITNs. To continue to address this, SBC activities should:**

- **Build on the idea that ITN use as a socially desirable and common behavior to increase the perception that it is a community norm.** Perceived norms around ITN use were positively associated with consistent net use across the survey regions (OR: 1.4; 95% CI: 1.1–1.6). Overall, few respondents (26%) perceived community norms for ITN use; that is, 26% perceived

that at least one-half of those who have nets use them nightly. To realize this perception, implementers can leverage channels like radio (weekly radio ownership was associated with consistent net use) and programs such as the *Healthy Life* campaign.

- **Increase positive attitudes around ITNs use to potentially improve consistent use of ITNs.** Overall, those with positive attitudes towards net use were two times more likely (OR: 2.1; 95% CI: 1.6–2.7) to consistently use a net than those who did not have positive attitudes towards net use. Role models in radio programs, radio

spots, and in community theater can demonstrate positive attitudes toward net use; so can testimonials during community meetings or health talks at facilities from community members who use nets consistently. The *Healthy Life* campaign is a good way to share information nationally, which can be complemented and reinforced by community level talks and testimonials.

- **Promote consistent net use and proper net care together.** The two behaviors are correlated and can benefit from being promoted together—overall, those who use their ITN daily were 1.8 times (CI: 1.46–2.11) more likely to hang up or tie their nets when not in use than those who do not use ITNs daily. Rates of consistent net use were similar in the South Central (74%) and North Central (75%) regions, but notably lower in Monrovia (61%). SBC promoting consistent net use and proper net care can also be shared and encouraged through the channels noted in the previous bullet.

- **Increase the proportion of households with an adequate supply of nets** THouseholds should have one net for every two members. Ensure that mass distribution campaigns are accompanied by SBC materials with clear information on how and where to access nets, the importance of maintaining a supply that ensures access for each household member, consistent net use by everyone in the household and ensure that such efforts are complemented through existing communication channels such as *Healthy Life* campaign materials, ANC clinics, maternity waiting homes, and other existing platforms.

Antenatal Care (ANC) and Intermittent Preventive Treatment During Pregnancy (IPTp)

BEHAVIORS AT-A-GLANCE

Of the women surveyed who reported a pregnancy during the previous two years:

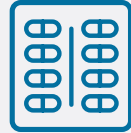


99% reported that they had attended at least one ANC visit.

81% reported that they had

four or more ANC visits.

- Greater Monrovia (78%),
- South Central (74%)
- North Central (83%)



95% reported receiving at least one dose of IPTp.

72% reported receiving at least two doses of IPTp.

51% reported receiving at least three doses of IPTp

- Greater Monrovia (41%)
- South Central (33%).
- North Central (57%)



38% reported that they were accompanied by their partner during at least one ANC visit.

69% of individuals (spouse and their partners) reported that they were involved in decision making regarding ANC (63% of women and 74% of men).

15% of respondents in partnerships reported they discussed ANC with their spouse partner in the past six months.

- Greater Monrovia (10%)
- South Central (26%)
- North Central (15%)



SBC RECOMMENDATIONS

1 CHALLENGE: While nearly all (95%) of women aged 15–49 years with a live birth in the two years preceding the survey reported having received one or more doses of IPTp, receiving two (72%) or three (51%) doses of IPTp was less common. Number of IPTp doses received was also related to the number of ANC visits: more women who attended four or more ANC visits received two or three doses of IPTp, compared to women who attended less than four ANC visits. To address this, SBC activities should:

- **Build self-efficacy for ANC and IPTp.** Those who felt confident in their ability to take IPTp were 2.9 times (95% CI: 1.9–4.5) more likely to have the intention to attend ANC in their first trimester than those who did not feel confident in their ability to do so. Additionally, those who were confident in their ability to attend ANC visits and take IPTp as recommended were 4.3 times (95% CI: 2.8–6.6) more likely to intend to take IPTp during a future pregnancy. SBC materials should increase self-efficacy by featuring the experiences of pregnant women who had

increased their self-efficacy to take IPTp. Additionally, women's groups could build up women's self-efficacy by practicing, sharing experiences, modeling and reinforcing IPTp and ANC attendance behaviors for others.

- **Support attitudes towards early ANC and IPTp.** Those with favorable attitudes towards ANC and IPTp were 1.7 times more likely (95% CI: 1.3–2.2) to intend to attend ANC in their first trimester than those who did not have favorable attitudes towards ANC and IPTp. Finding reputable sources or influencers to share their positive attitudes and experiences towards ANC and IPTp through testimonials and using entertainment education to show positive role models accessing ANC services can help increase positive attitudes towards early ANC and IPTp.
- **Increase knowledge of recommended number of ANC attendance and frequency and IPTp.** Those who knew both the recommended frequency of ANC visits and the recommended number of doses of IPTp were 2.4 times (95% CI: 2.0–3.0) and 1.4 times (95% CI: 1.2–1.7) more

likely, respectively, to intend receiving ANC services in their first trimester than those who did not know these facts. Similarly, those who knew the recommended frequency of ANC attendance and knew the recommended number of doses of IPTp were 1.6 (95% CI: 1.96–2.95) and 1.7 (95% CI: 1.15–1.65) times more likely to intend to take IPTp in a future pregnancy than those who did not, respectively. Providers should know the importance of this knowledge for increasing outcomes and share the information with patients, and SBC should also be focused at women’s groups to increase early ANC attendance and receiving the recommended number of doses of IPTp.

- **Improve gender norms related to malaria in pregnancy.** Those who have gender equitable views related to malaria in pregnancy were 1.74 times more likely (95% CI: 1.37–2.22) to intend to take IPTp in a future pregnancy than those who had inequitable gender views around malaria in pregnancy. Any SBC programming around malaria in pregnancy should use a gender lens to include components that seek to improve gender norms around malaria in pregnancy.

2 CHALLENGE: While nearly all (99%) women with a live birth in the two years preceding the survey reported they had attended at least one ANC visit, 19% did not attend at least four ANC sessions. To address this, SBC activities should:

- **Increase the perception of normative support for malaria prevention in pregnancy,** including support for attending four or more ANC visits during pregnancy. Less than half of respondents (42%) perceived at least four ANC visits to be the norm for pregnant women in their community, with variation by region (30% in Greater Monrovia, 20% in South Central, and 49% in North Central). Additionally, those who thought there was a strong community norm around attending four or more ANC visits were 1.3 times (95% CI: 1.0–1.62) more likely to intend to attend ANC in their first trimester over those who thought there was not such a strong norm. Traditional and religious leaders can increase support for ANC attendance, encouraging male participation and helping to normalize public discourse of four ANC visits.
- **Amplify malaria SBC in the media.** Those who had heard any malaria-related SBC in the media were 1.4 (95% CI: 0.93–1.91) times more likely to have the intention to attend ANC in their first trimester than those who did not. The Healthy Life campaign can stress the importance of ANC during pregnancy, complemented by discussions on ANC during Big Belly Club and other community-level maternal support meetings.

Media Habits and Channels

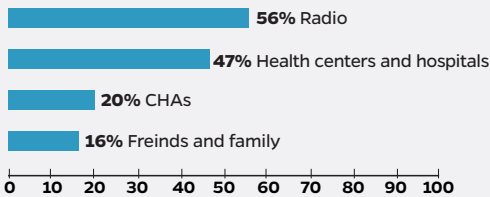
AT-A-GLANCE



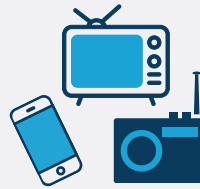
36% had heard a malaria message in the past six months.

44% could recall a specific campaign slogan, such as “Sleep under a mosquito net every night everywhere.”

Source of malaria messages, among those who had heard them in the past 6 months



Participants could select multiple options



63%

of individuals had a mobile phone.

- Greater Monrovia (84%)
- South Central (74%)
- North Central (54%)



47% of individuals listened to the radio at least once a week.

- Greater Monrovia (59%)
- South Central (48%)
- North Central (43%)

45% of respondents who listened to the radio weekly, listened in the early morning (4:00 a.m. - 12:00 p.m.).

43% listened during the evening (4:00 p.m.-12:00 a.m.).

21% of individuals watched television at least once a week.

- Greater Monrovia (45%)
- South Central (20%)
- North Central (12%)

73% of respondents who watched television weekly prefer to watch during the evening hours (4:00 p.m. - 12:00 a.m.).



MEDIA RECOMMENDATIONS

1 CHALLENGE: Recall of malaria messages was low—only 36% had heard a malaria message in the past six months. Using the same communication strategy will continue to leave the majority unexposed to malaria messages. Malaria SBC should employ diverse media, approaches, and broadcast frequencies and times to reach a wider audience.

- Radio is most reliable channel to reach people with malaria prevention and treatment messages, and can complement community engagement efforts, amplifying and reinforcing malaria messages. Program planners should consider how a variety of channels can strengthen messaging and ensure broader reach, since weekly radio listenership is still quite low at 47%.

- Many individuals own mobile phones and these can also be used for complementary malaria messaging. The more times and ways people hear the same message, the more likely they are to act.