Ministry of Health

Mainland Tanzania MBS Brief

What Do the Data Mean?

INTRODUCTION

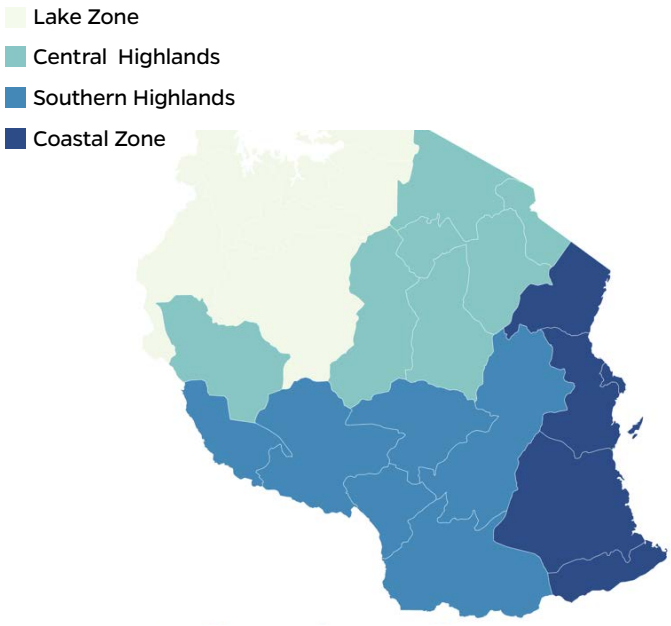
The National Malaria Control Programme (NMCP) continues to strategize effective malaria control interventions in Mainland Tanzania, where malaria remains a major public health concern. With funding from the U.S. President's Malaria Initiative and technical support from the Breakthrough ACTION project, managed by the Johns Hopkins Center for Communication Programs, the NMCP of Mainland Tanzania and other stakeholders implemented a Malaria Behavior Survey (MBS) to examine the psychosocial factors that influence malaria-related behaviors. The study collected data from a representative sample of households across four geographic zones (Lake, Coastal, Southern Highlands, and Central Highlands) from June-July 2021. It used a cross-sectional survey design in which structured questionnaires were administered to a random sample of women (15–49 years old) and men (18–59 years old). The sample size included 1,106 men and 3,362 women from 3,105 households. The analysis included bivariate and multiple logistic regression to test the associations between determinants and behaviors.

The study had two main objectives: First, to better understand the sociodemographic and psychosocial characteristics (as described by the **Ideation model of behavior change**) associated with malaria-related behavioral outcomes in mainland Tanzania. Second, to use this information to determine the appropriate focus of social and behavior change (SBC) activities.

WHAT DO THE DATA MEAN?

This MBS brief summarizes the proportion of the population practicing a variety of recommended malaria behaviors and the demographic and psychosocial factors associated with practicing them. All results cited from logistic regressions are statistically significant at the $p<0.05$ level or less. The brief also uses these results to present recommendations for SBC programs for each of the malaria intervention areas. A complete report is available on the MBS Website.

Tanzania MBS Study Zones



The Mainland Tanzania MBS collected data from:

3,105 households

4,468 individual respondents
3,362 women 1,106 men

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National Malaria Control Programme

Breakthrough ACTION FOR SOCIAL & BEHAVIOR CHANGE

Breakthrough ACTION is funded by the U.S. Agency for International Development (USAID) and U.S. President's Malaria Initiative under the terms of Cooperative Agreement No. AID-OAA-A-17-00017.

Malaria Case Management

BEHAVIORS AT-A-GLANCE

Among caregivers of children under 5 who had a fever in the two weeks before the survey:

91%

sought any kind of advice or treatment on the same day as, or the day after, fever onset (prompt care-seeking), but only 78% in the lowest quintile did so

56%

sought appropriate care (from a health facility)

43%

sought appropriate care promptly

49%

lived near a facility (5 km or less)

43%

lived far from a facility (>5 km)

SBC RECOMMENDATIONS

CHALLENGE: Only 43% of caregivers of a child under 5 with fever sought prompt and appropriate care, defined as seeking treatment the same day or day following the onset of fever at a health facility.

- **Build trust in community health workers (CHWs).** Respondents with favorable perceptions of CHWs had 7 times higher odds of seeking care promptly and appropriately. In fact, 80% of the sample held favorable perceptions of CHWs. SBC programs should promote services provided by CHWs (such as counseling, assessment, and referral) and work closely with service delivery programs to ensure that concerns are quickly reported and righted and any mistrust in CHWs does not spread. The results also suggest that expanding CHW programs to more areas could boost appropriate care. Finally, SBC programs can work with Village Health Committees to identify how the latter might support CHWs, who are often overstretched and under-compensated.
- **Help caregivers anticipate and overcome barriers to access.** With significantly higher rates of care-seeking among urban respondents and those who live near a health facility, the results suggest that structural challenges such as distance to facilities pose major hindrances to prompt and appropriate care-seeking in Mainland Tanzania. SBC programs can work with Village Health Committees to encourage households to develop a savings fund for emergency healthcare transport and expenses, to participate in insurance schemes and familiarize themselves with the terms of coverage, and to anticipate other household needs when a caregiver is away at a health facility with a sick child. Similarly, Village Health Committees can be used to raise resources for a community fund, run an emergency lending scheme, and maintain a mobile phone or motorbike for emergency transport. Universal health insurance coverage, once materialized, may help reduce barriers associated with costs in the future.

Insecticide-Treated Nets

BEHAVIORS AT-A-GLANCE

Net access

55%

of nets found in households were ITNs, almost all of which were free

27%

of nets found in households were purchased

55%

of households had at least 1 ITN and 52% had at least 1 ITN for every 2 people

89%

of residents in households with enough nets (at least 1 ITN for every 2 people) used a net the previous night

8%

of residents in households with insufficient nets (fewer than 1 ITN for every 2 people) used a net the previous night

Consistent use

73%

of respondents used a net every night of the week

Net care

33%

of respondents reported that they roll or tie up their nets when not in use

84%

of existing household nets had ever been washed, and 70% of those had been washed with detergent (NOT recommended)

93%

of washed nets were dried in the sun (NOT recommended)

SBC RECOMMENDATIONS

CHALLENGE 1: Access to nets is the leading barrier to net use in mainland Tanzania. The data shows that 89% of individuals in households with enough nets (at least one net for every two persons) used one the night before the survey, however, only 52% of households had enough nets, and 25% of households had no nets at all.

- **Use SBC to support the sustained acquisition of and access to nets.** Tanzania's 2023-2024 mass distribution will lead to major strides in increasing access to nets. SBC can promote household participation in mass, ANC, and school distribution, and in encouraging redistribution of excess nets to other family members or neighbors with no nets. Although messaging around redistribution has been in place for years, only **16%** believed that gifting an unused net to one's neighbor was a norm. Social marketing approaches can be used to encourage purchasing of government-vetted treated nets to help sustain coverage between campaigns wherever treated nets are easily available through the commercial sector. One in four nets in the sample had been obtained from the private sector, suggesting that there is a robust market for nets in the country.

CHALLENGE 2: One in four (27%) of respondents do not use nets every night of the week, and rural residents are 34% less likely to do so compared to their urban counterparts. Logistic regression results suggest that multiple psychosocial factors contribute to consistent net use, even after controlling for the number of nets in the household. Below are recommendations to leverage the three factors with the strongest association with consistent net use:

- **Strengthen self-efficacy (the belief that one can perform a behavior).** Those reporting high levels of self-efficacy to use mosquito nets had **five times** higher odds of consistent use ($p<0.001$). The proportions of respondents with self-efficacy to use nets varied: the Lake zone had the lowest at 83% and the Coastal zone had the highest at **98%**. To raise self-efficacy, SBC programs can use opinion leaders or peer educators to model consistent ITN use. Seeing others successfully using ITNs can increase individuals' belief in their ability to use them as well. Community members can be encouraged to exchange stories and recognize each others' progress toward consistent net use. ·

- **Promote positive attitudes toward ITN use.** Attitudes are made up of cognitive and emotional responses toward an idea or action; these responses can be positive or negative. In Tanzania, having favorable attitudes towards ITN use increased the odds of consistent ITN use almost **threefold**. The MBS showed that many negative perceptions toward ITN use persist. About a **third** associated net use with side effects, the odor of the insecticide, inconvenience, reduced sex drive, and infertility. SBC programs that employ dialogue with trusted information sources can debunk these myths and increase the perception that net use is attractive, safe, convenient and lead to positive health impact. Community leaders can recognize households who use nets consistently during village and community meetings/gatherings.

- **Position ITN use every night as a community norm.** Norms were associated with a twofold higher odds of consistent net use. Only 53% believed that most people in their community use a mosquito net every night, yet 89% of respondents in households with sufficient nets sleep under them. Making this high rate of net use known can help bring this otherwise private behavior to light and change perceptions around what is commonly practiced, leveraging the potential of community norms. SBC programs can take it a step further and position net use as a positive cultural or national norm.

CHALLENGE 3: Detergents were used with 70% of washed nets and almost all (93%) of them were dried in the sun; both practices can degrade the insecticide in an ITN. Only one-third (33%) of respondents tie or roll up their nets when not in use, and fewer report handling nets with care (15%); however, both habits are easy to maintain. The data suggests that SBC programs should intensify their efforts to encourage households to practice multiple net care behaviors to lengthen the protection lifespan of nets in homes.

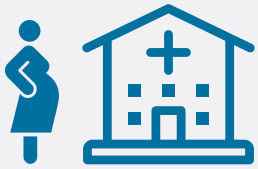
- **Address negative attitudes about net care.** Respondents with favorable attitudes toward net care had six times higher odds of caring for their net and were far more common in the Coastal zone **(91%)** compared to the other zones, where only **74-81%** agreed that they could take action to make their nets last longer. Only **83%** felt that an old net can still protect against malaria if it is well cared for, and only **66%** believed that other people in their community care for their nets. SBC programs should emphasize that caring for nets is effective and that it takes only simple tweaks to current routines. Visuals (print and digital) that show the difference between an old, well-cared-for net and a newer, worn-out net can make the potential financial and health impact more tangible. Finally, testimonies from influencers and peers can boost the perception that net care is a desirable practice.

- **Remind communities that nets are valuable and that properly caring for nets ensures they continue to provide value.** Attitudes about ITNs in general influence the decision to care for them. Overall, **favorable attitudes towards ITNs** increased the odds of positive net care behaviors **fourfold**. This result suggests that individuals who value nets are more likely to care for them.

Antenatal Care and Intermittent Preventive Treatment During Pregnancy

BEHAVIORS AT-A-GLANCE

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



94%
attended at least one antenatal care (ANC) visit

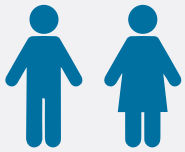
78%
had 4 or more ANC visits

10%
had 8 or more ANC visits

90%
received at least one dose of IPTp

47%
received at least 3 doses of IPTp

95%
intend to take IPTp during their next pregnancy



71%
attended their first ANC visit between 1-4 months of pregnancy and only 74% intend to do so during their next pregnancy

75%
were accompanied by their partner to at least one ANC visit

78%
reported receiving a net during an ANC visit

SBC RECOMMENDATIONS

CHALLENGE: While almost all respondents had initiated ANC early during their most recent pregnancy, only 74% intend to do so in the next one. Similarly, a laudably high proportion of respondents who had been pregnant within the past 2 years (78%) had 4 or more ANC visits. However, only 2 in 3 women with 4+ ANC visits received at least three doses of IPTp. To maintain early ANC and improve IPTp 3+ rates, SBC programs can:

- **Improve knowledge about malaria in pregnancy (MIP).** Only **6%** of respondents had comprehensive knowledge of the timing of care, number of visits, and number of SP doses. SBC programs should seek to boost women's awareness about the recommended behaviors. Songs are particularly helpful as memory aids and can be used in both interpersonal and mass media communication. Targeted SMS to pregnant women can also be used to increase ANC attendance and SP uptake.[1]

- **Encourage spousal communication about MIP, particularly early ANC.** Logistic regression shows that respondents who discussed ANC attendance with their spouse or partners were almost **twice** as likely to intend to initiate ANC in the first trimester during a subsequent pregnancy. SBC programs should target women from the lowest wealth quintiles, in urban areas, and with primary or no education since they were significantly less likely to intend to initiate ANC early in their next pregnancy.

- **Promote positive attitudes toward SP.** Factors associated with the intention to use IPTp in a future pregnancy were not explored through logistic regression because it is already highly prevalent (>90%). However, results show that most respondents still held some misconceptions. While most **(86%)** respondents viewed SP positively, almost **80%** believed women should not take SP on an empty stomach. Another equally prevalent belief was that providers would refuse to give antimalarials to pregnant women who hadn't

[1] Flueckiger, R. M., Thierno, D. M., Colaço, R. et. al. (2019). Using short message service alerts to increase antenatal care and malaria prevention: findings from implementation research pilot in Guinea. The American Journal of Tropical Medicine and Hygiene, 101(4), 806.

eaten before the appointment. SBC programs should increase CHW and ANC providers' skills in counseling women about MIP recommendations and the above misconceptions.

- **Reduce barriers to access.** Women from the Lake Zone and from rural areas were least likely to report four or more ANC visits or receive 3+ doses of SP. Logistic regression showed that factors generally associated with greater access, such as primary or higher education, higher wealth quintiles, and being near a health facility, all result in higher odds of attending four or more ANC visits. Similar access factors were significantly associated with the intention to start ANC early during a subsequent pregnancy. This suggests that community distribution of SP may be particularly valuable in areas that are farther from facilities. In-reaches, where community health workers mobilize clients to visit a facility on certain days to obtain services (an approach used in family planning), may also be worth trying, and may help women overcome cost, transport, and psychosocial barriers. SBC programs can help communities advocate for these services and commodities, and when available, encourage eligible clients' participation and completion. Finally, SBC programs can use materials that depict true stories of "strong parents" (and the supportive family and community who helped them) who managed to overcome similar access barriers.

Indoor Residual Spraying

BEHAVIORS AT-A-GLANCE

Among respondents who reported that their households had been offered indoor residual spraying (IRS):

87% of those offered IRS accepted it

79% of all respondents are willing to accept IRS in the future if offered

SBC RECOMMENDATIONS

Challenge: One-fifth of respondents expressed doubts about future acceptance of IRS. Reported acceptance of IRS is high, but lower than the commonly used 90% target. Experience from other contexts shows IRS acceptance rates can decrease over time. SBC programs should take the following steps to ensure IRS acceptance stays high, and to help achieve higher coverage in areas where it will be implemented:

- **Increase the population's confidence in the effectiveness of IRS.** Only 36% believed that IRS was effective, and this belief was least prevalent among women **(17%)**, youth aged 15-24 **(21%)**, and respondents with no education (21%) compared to **82%** of men. SBC activities should target these groups as they talk about reductions in malaria caseloads in the area following the introduction of IRS. Testimonials from residents who have experienced fewer malaria episodes after their homes have been sprayed could be used. Last but not least, health authorities could also raise trust in IRS, stating for example, that this approach "underwent rigorous testing" to receive "WHO and MOH approval," and its ability to provide 8-10 months of protection from malaria.
- **Sustain and increase positive attitudes about IRS.** Only respondents who were familiar with IRS were asked about their perceptions of IRS. A moderately high proportion **(77%)** held favorable attitudes toward IRS. Only **53%** disagreed with the statement that many people develop skin problems after spraying, implying that half did not know enough to have an opinion or agreed with this belief. Furthermore, **33%** thought it was unsafe to touch the dried walls after they had been sprayed with insecticide. Health authorities and community leaders should assure the population that IRS has rare to no side effects and is much safer than getting malaria. Testimonials and positive stories should be shared portraying communities who have received IRS and have not experienced safety issues. For the **48%** who believe that people have problems with bed bugs after spraying, the negative connection between IRS and bedbugs can be reframed. For example, health officers and CHWs can educate the public to clarify that bed bugs are not the results of IRS. They are normally hidden and can be irritated by the insecticide used in IRS. Finally, only 64% were uncomfortable with leaving their possessions outside their house during spraying. Spray teams, community leaders, and Village Health Committees can work with households to plan how they might mitigate this concern, such as by lending tarps to provide privacy and protection over household items.

[1] Flueckiger, R. M., Thierno, D. M., Colaço, R. et. al. (2019). Using short message service alerts to increase antenatal care and malaria prevention: findings from implementation research pilot in Guinea. The American Journal of Tropical Medicine and Hygiene, 101(4), 806.

Media Habits and Channels

BEHAVIORS AT-A-GLANCE

37%
had heard a malaria message in the 6 months before the survey (Jan-Jun 2021)

78%
could recall a specific campaign slogan

The most common sources of malaria messages were radio

56%

and health clinics

50%

78%
own a mobile phone

42%
watch TV at least once a week

61%
listen to the radio at least once a week

Early evening and late evenings (4 pm to 12 am) are the best times to reach both men and women through TV

Mid mornings to late evenings (8 am to 12 am) are the best times to reach women through radio

Early mornings (4 am to 8 am) and **evenings** (4 pm to 12 am) are the best times to reach men through radio

SBC RECOMMENDATIONS

- **Increase SBC programming in the Lake zone.** The Lake zone reported the lowest care-seeking, IPTp 3+, and net use rates in the MBS, as well as the lowest exposure to malaria messaging in the past six months **(27%)**. In comparison, exposure was slightly and significantly higher at **40%** in the other zones ($p<0.001$). These results suggest that while all zones should have SBC programming, the Lake zone should be targeted for additional programming. Considering that this zone also has the lowest usage across radio, TV, and mobile phones, robust community-based approaches should also be used.

- **Use a multi-channel approach to reach most of the population.** The results suggest that one channel cannot reach most of the target audience. Although **78%** of all respondents owned a mobile phone, this was only true for **57%** of those in the Lake zone. Radio appears to reach a fair cross-section of the population, ranging from 35% in the lowest wealth quintile to **80%** in the highest, and about half or two-thirds across gender and age groups. A strategy combining TV, radio, SMS, integrated voice response, and health clinic messaging (in the form of provider or CHW counseling, health talks, point-of-service materials and use of TVs in outpatient waiting areas) would help achieve audience saturation.

- **Allocate resources to schedule TV and radio broadcasts in the evenings and 4 am to 12 pm, respectively.** There are significant differences in radio listenership times by gender; **19%-24%** of female listeners can be reached anytime between 8 am to 12 am, while certain time slots (4 am to 8 am, and 4 pm to 12 am) are particularly advantageous for reaching men **(22-29%)**. For TV, men and women are most likely to watch in the late afternoons and evenings between 4 pm to 12 am. Up to **27%** (4 pm to 8 pm) and **57%** (8 pm to 12 am) of TV viewers can be reached during these hours. SBC messaging should target prime times for both TV and radio to achieve high coverage and listenership. Additionally, messages can be targeted to programs that attract more audiences, such as football matches for men.