

AMP net care SBC survey report

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1 Background

Social and behaviour change (SBC) for net care, hole prevention and retention has been recommended since 2014 in the US President's Malaria Initiative (PMI) Technical Guidance and by the World Health Organization (WHO). SBC for net care has been associated with improvements over time in net care behaviours, and improved net care behaviours are associated with a six to nine month longer median net lifespan in studies in Nigeria and Uganda [1, 2].

The extent to which net care SBC has been implemented across malaria-endemic countries has been unclear. The Alliance for Malaria Prevention (AMP) wished to understand what types of messaging and activities had been undertaken in recent years. The objectives of the survey were to better understand the variety of approaches being used, and to help improve the design and implementation of net care messaging across malaria-endemic countries.

2 Methods

A short online questionnaire was developed and disseminated through Roll Back Malaria Partnership to End Malaria (RBM) to national malaria programme coordinators for onward transmission to SBC and Vector Control Officers. The survey link was also shared through RBM's Vector Control Working Group, the AMP listserv, and the RBM SBC Working Group listserv. AMP technical assistance providers were also asked to share the survey link directly with counterparts at national malaria programmes with which they collaborate. The survey posed questions about SBC activities related to net care conducted over the previous two years and about plans for future activities.

The survey was open from 26 January to 24 February 2023 and 78 responses were received. All responses were reviewed and nine records from the pre-testing period or from global-level respondents without direct knowledge of country-level activities were dropped. One set of duplicate responses was identified and one copy was dropped. In late March, we reached out directly to countries that had not submitted any responses and recorded ten additional responses. Data were cleaned and analysed using R. An archived version of the questionnaire is [available online](#) and summarized in Section 6.

3 Results

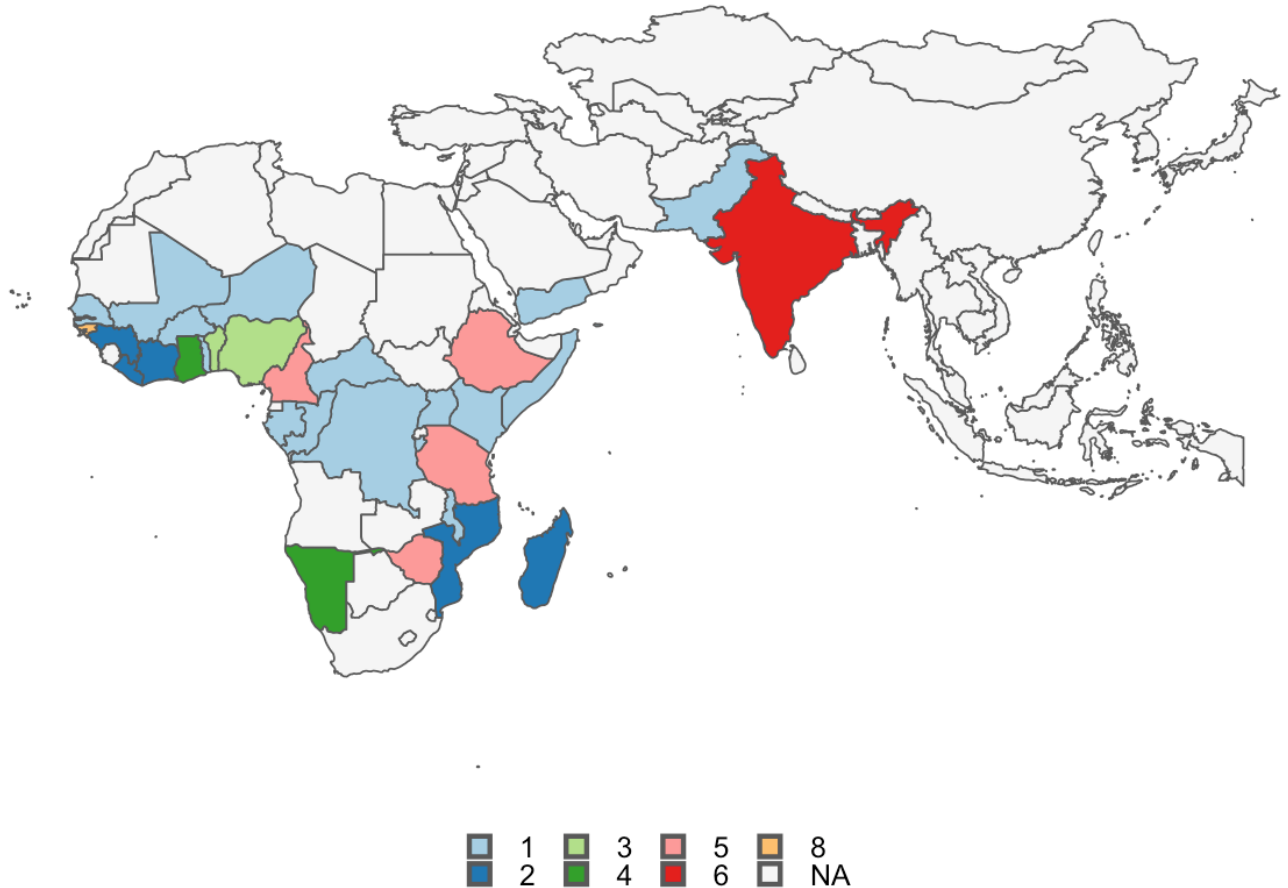
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A total of 78 responses were included for analysis from thirty-four malaria-endemic countries (Fig. 1), primarily in Africa but also Asia (India, Pakistan), Middle East (Yemen), and South America (Brazil). Twelve of the 42 countries in Africa that were contacted did not provide a response.



Brazil (n=1) not shown

Figure 1: Map of number of responses received in online survey, per country

A mix of affiliations was reported. More than one third of respondents self-identified as national malaria programme officials. Eighteen (23 per cent) were implementing partners, twelve (15 per cent) were “other”, nine were from research/academia and six were from donor agencies (Fig. 2). Job titles of those listing “other” as their affiliation included doctors, regional advisers, consultants and entomologists. Overall, 29 per cent of countries submitted responses from a national malaria programme SBC officer, and 59 per cent from the national malaria programme Director or a Vector Control Officer.

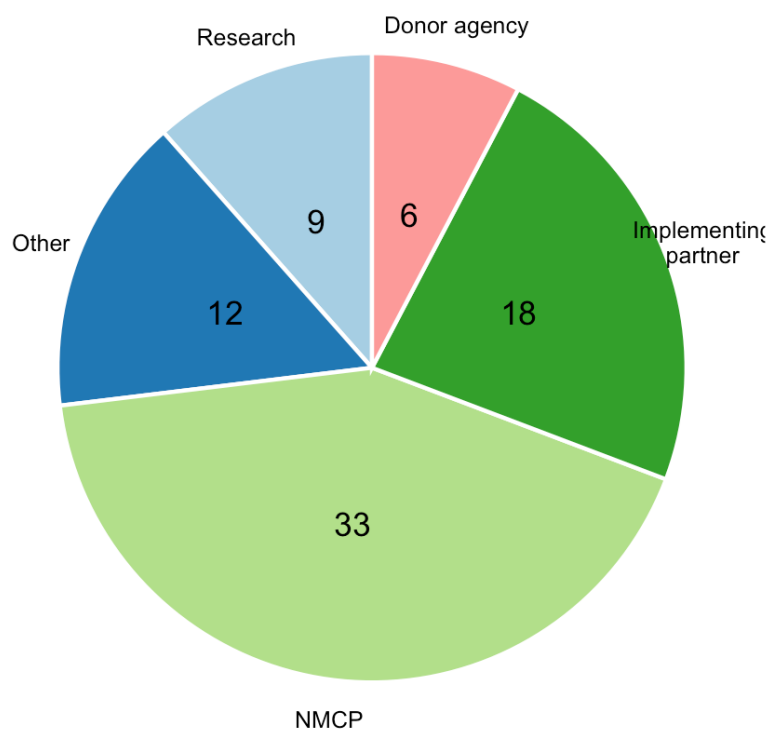


Figure 2: Number of responses received in online survey, by type of organization

3.1 Global overview of net care SBC activities reported

Overall, 74 per cent of respondents were aware of net care SBC activities in their countries. Burundi, Central African Republic, Gabon and Somalia each had one respondent, none of whom reported awareness of net care SBC efforts. Awareness was sometimes mixed within country respondents - four of Ethiopia's five respondents were not aware of net care SBC activities, and three of Namibia's four respondents were likewise unaware. In several of these cases, the unaware respondents were researchers, healthcare practitioners, or served in regional coordination roles, and therefore may have been less privy to national planning around ITN SBC.

Fig. 3 illustrates that awareness varied by respondent organization type: implementing partners had the highest rates of awareness at 89 per cent, followed by national malaria programmes at 76 per cent, donor agencies at 67 per cent, and research institutions at 67 per cent.

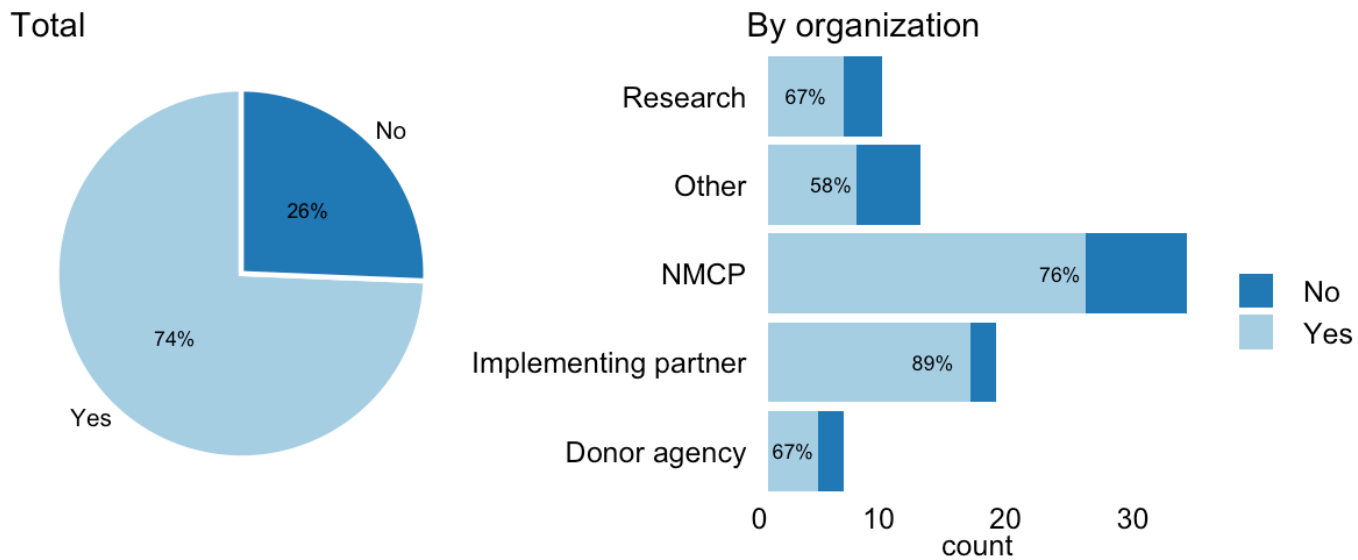


Figure 3: Percentage of respondents aware of SBC efforts in their country

3.2 Extent and nature of SBC activities and messages

Respondents were asked how widely the net care SBC messages were disseminated. Overall, 49 per cent of respondents reported that activities were conducted nationwide. Respondents from the same country did not always agree about the reach of activities, with seven countries providing conflicting responses about whether activities were nationwide or restricted to certain regions or areas. Around a quarter of respondents did not provide an answer, and six per cent said they were unsure.

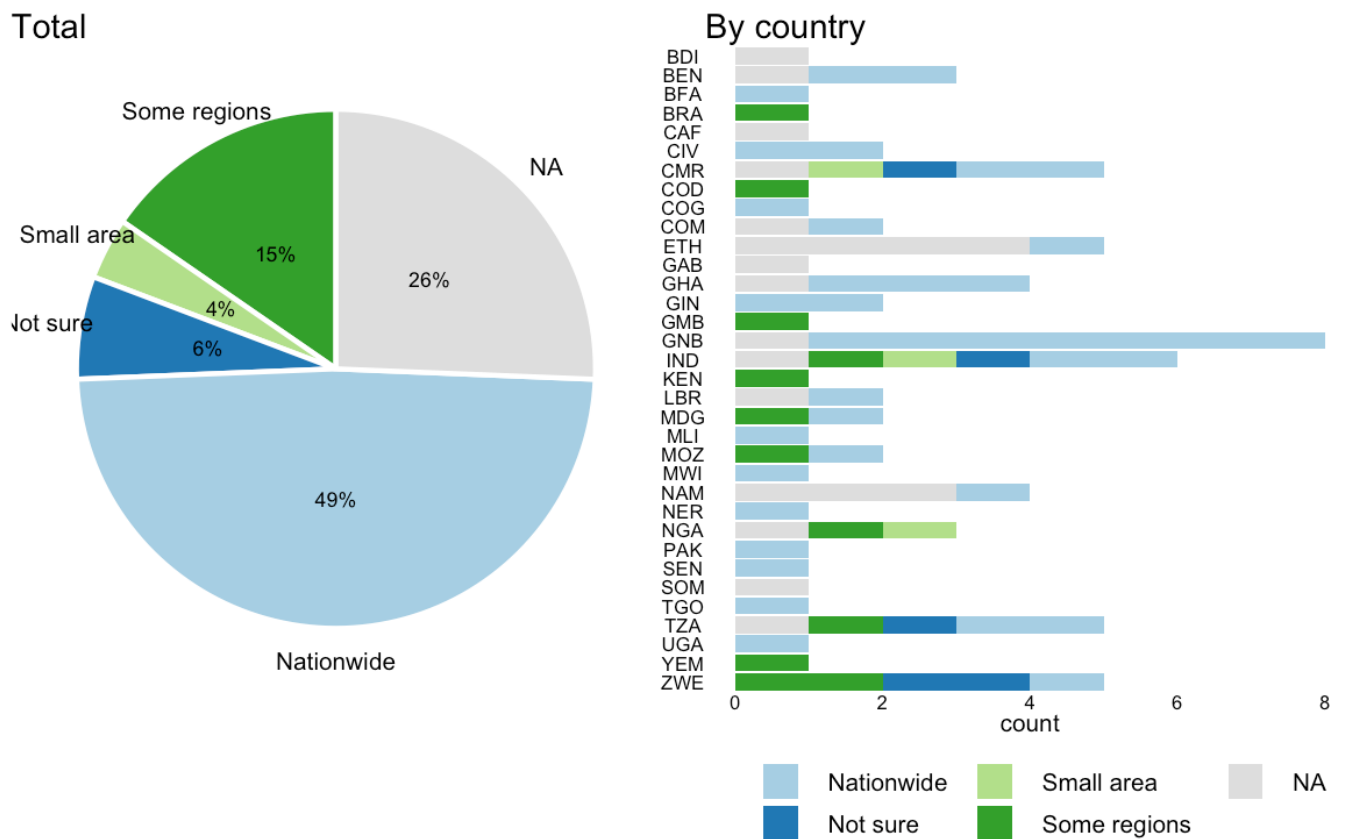


Figure 4: Reach of net care SBC activities for all respondents (left) and by country (right)

The most frequent key messages reported across all respondents (Fig. 5) were discouraging other uses (21 per cent), should not be used for fishing (20 per cent), repairing nets (20 per cent), preventing holes (15 per cent) and tying up (11 per cent). Nearly all countries provided several different messages.

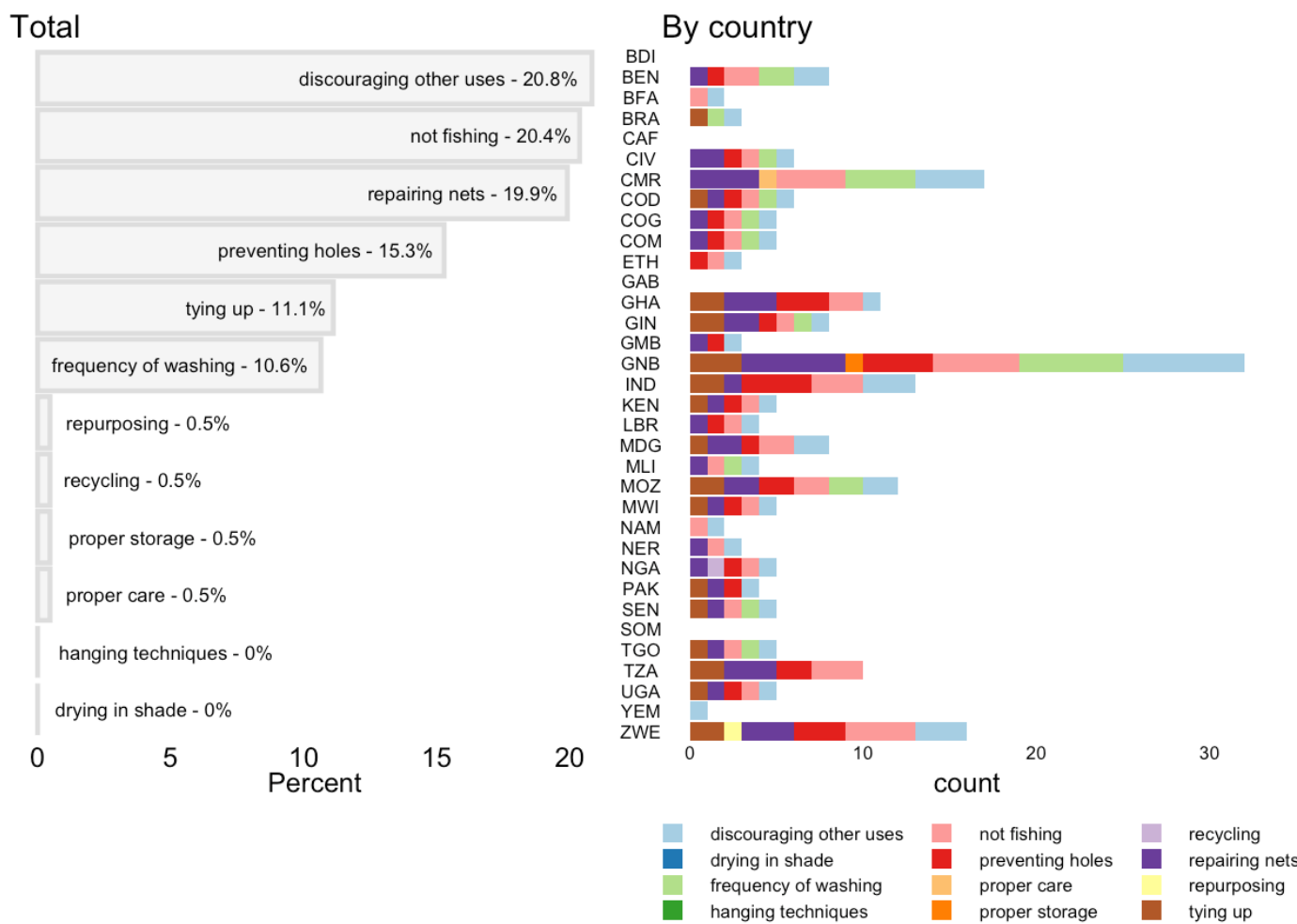


Figure 5: Key behaviours promoted in net care SBC activities for all respondents (left) and by country (right)

Respondents reported that net care SBC efforts (Fig. 6) occurred primarily during mass campaigns (33 per cent), or were conducted both routinely and during campaigns (29 per cent), often as part of net distribution activities, or through monitoring and follow-up. Of the countries with more than one respondent, only two countries provided consistent responses about the timing of SBC activities for net care.

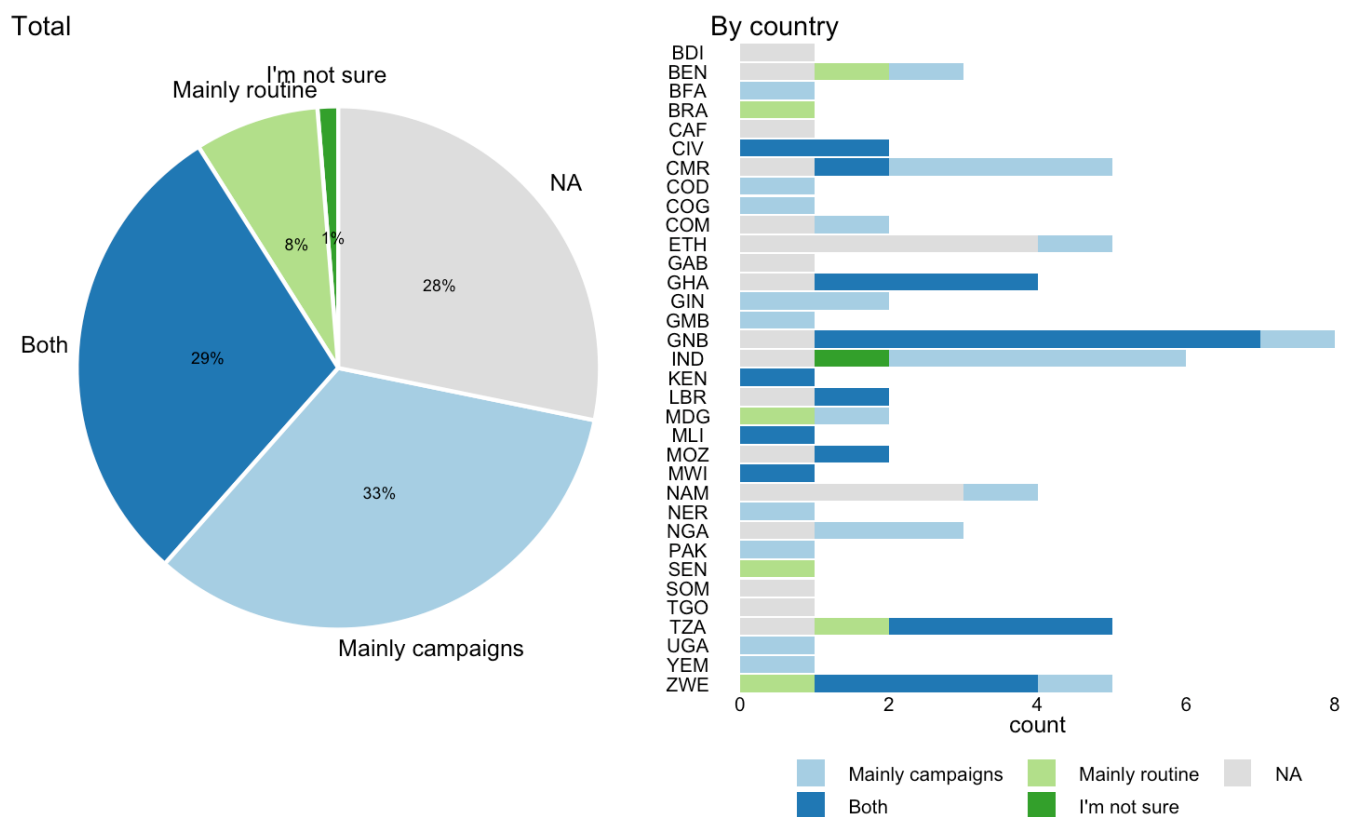


Figure 6: Timing of SBC efforts for all respondents (left) and by country (right)

When asked for further information about the implementation of the net care SBC activities, open-ended responses highlighted that frequent messaging took place through key health services, such as via antenatal care (ANC) clinics in Ghana, Guinea Bissau, Malawi, Mali, Zimbabwe, and at vaccine or post-natal consultations (Ghana, Guinea Bissau, Malawi, and Zimbabwe). Routine messaging through community-based health services was also referenced with an example of daily audio messaging in a health centre in Madagascar.

A variety of approaches was used to distribute messages (Fig. 7). Interpersonal communication activities focused on school, religious and community leaders, drama, health and community health workers. Respondents highlighted interpersonal communication via healthcare workers and community health workers in countries including Cote d’Ivoire, Guinea Bissau, Malawi and Zimbabwe. Community mobilization by community and religious leaders was cited in Cameroon and Republic of Congo Brazzaville, and theatre groups were mentioned in Guinea Bissau (Fig. 7).

Zimbabwe shared information on the “My Net, My Life” initiative that sought to empower local communities to value, accept and use nets. Volunteers regularly hosted community meetings and visited homes to show people how to handle nets properly and explain the importance of using nets.

The initiative included a continuous distribution system, supported by a collaboration between PMI and the Ministry of Health and Child Care.

Media was the other key channel to disseminate messages, with radio and print as the majority, followed by social media, SMS and then TV (Fig. 7). Countries tended towards layering and reinforcing communication efforts through multiple channels, although Benin, Burkina Faso, Cameroon, Cote d'Ivoire, Rep. Congo, DRC, Madagascar, Mali and Niger reported using only mass media, largely radio.

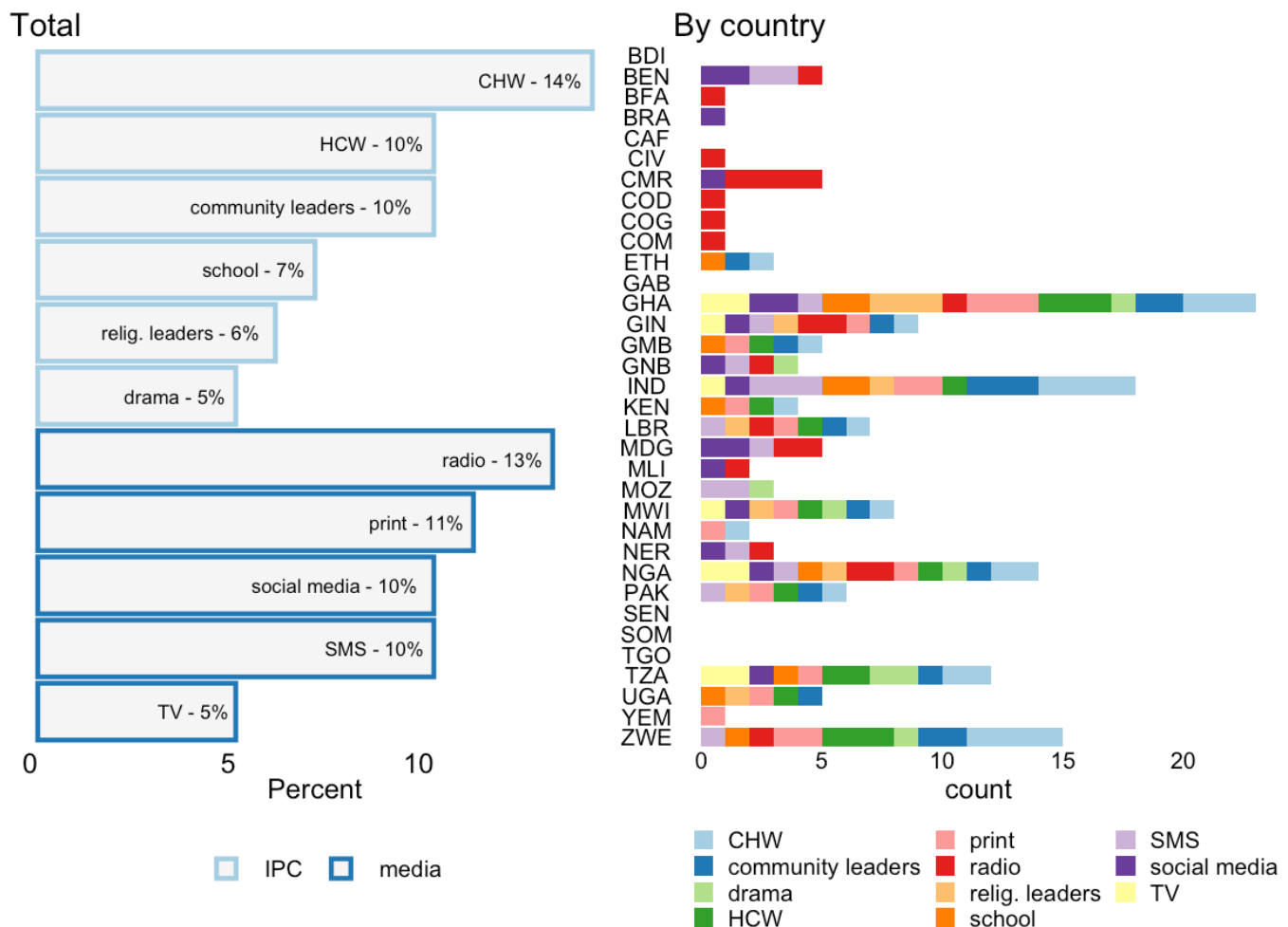


Figure 7: Channels used for net care SBC efforts reported by all respondents (left) and by country (right)

3.3 Examples of net care messaging

Twelve countries uploaded examples of materials that had been disseminated. Guinea Bissau shared the text of a TV spot in Creole that focused on net care, washing, and drying.

“Cuma tenda cu ta dadu i ta recomendado pa i bata labadu cada 3 mis, só cu iago cu sabon i pa secal na sombra. Nó dibidi continua maral no seco cu tchuba, pabia mecinhu cu i purparadu cu el, na tadjanu di mosquito cu ta punu panha paludismo. NÓ DJUNTA MON, NÓ TADJA PALUDISMO”. [The mosquito net, which is distributed free of charge, should be washed every 3 months with water and normal soap and should also be dried in the shade. We must continue to use them during the dry and

rainy season because they are nets prepared with products that protect us from the mosquitoes that transmit malaria. Together, we can prevent malaria.]

Respondents from Liberia shared a net care instruction pamphlet (Fig. 8 and Fig. 9), describing proper use of nets, examples of misuse, and giving instructions for washing, preventing holes and repairing.

Zanzibar and Ghana provided visual examples of general net use messaging (not shown). Several countries shared copies of key messages or communication guides used during mass ITN campaigns:

1. Cameroon shared a checklist for door-to-door ITN distributors with key ITN messages, including causes of malaria, use of ITNs, recommendations to only wash ITNs four times per year using mild soap, and guidance on repairing holes.
2. Mali also shared a key message guide whose net care recommendations including washing only when necessary with mild soap, and repairing holes.
3. Republic of Congo provided a printed handout with net use and hanging instructions, and recommendations to wash nets with mild soap and to dry in the shade or inside.
4. Togo shared a communication guide, including key net care messages discouraging misuse, promoting washing with mild soap and drying in the shade, and repair of small holes. Similar messages were recommended for school education sessions.

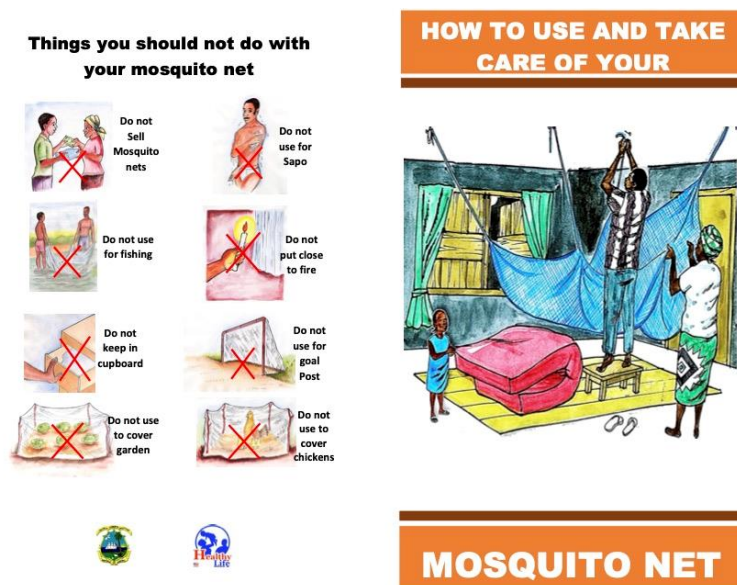


Figure 8: Net care booklet from Liberia, front/back cover

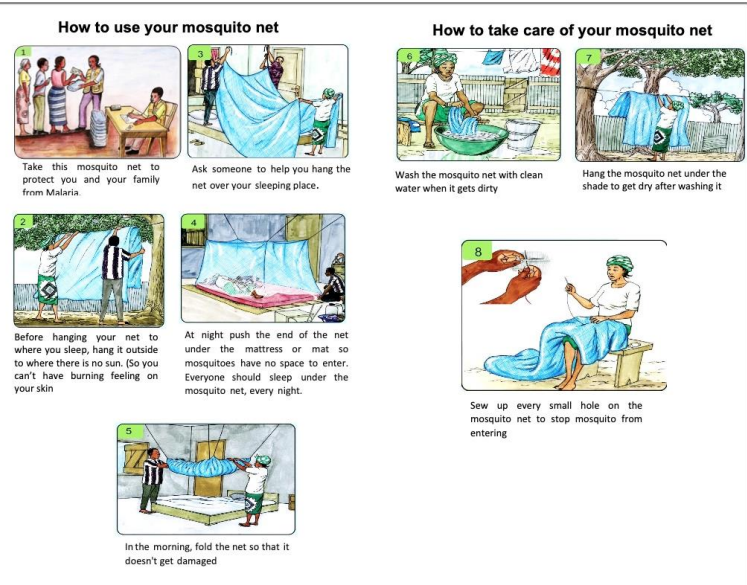


Figure 9: Net care booklet from Liberia, inside

Tanzania shared a brochure from mainland school ITN distributions (Fig. 10), part of the “Zero Malaria Starts with Me” campaign. It describes the “four important steps for taking care of mosquito nets”. The steps are (1) hanging over the bed (2) tucking it in well so mosquitoes cannot get inside (3) sleeping under it every night (4) taking good care of it to prevent malaria.



Figure 10: Net care poster from mainland Tanzania promoting net use, care and repair

Madagascar shared a poster (Fig. 11). At the top the text says “Malaria? It won’t hurt our family.” There are instructions for washing the net gently (1), with soap and not detergent (2), tying the net up to prevent holes (3), and repairing tears (4). Text in the green box reminds people that everyone should use nets all year round to protect against malaria. COVID-19 prevention measures are also listed at the bottom.



Figure 11: Net care poster from Madagascar promoting net use, gentle washing, tying up and repair

When asked what feedback, if any, had been received from communities about the net care SBC activities, 38 per cent gave no response, and roughly one quarter of respondents mentioned feedback had been positive. Another 18 per cent reported challenges or concerns of the community, including:

- net recipient concerns about the texture and/or size of the net (Ghana, Liberia, Guinea, Tanzania)
- net recipient requests for mild soaps (Rep. Congo)
- complaints from men about the net height being restrictive during sex (Ghana)
- concerns that nets were no longer killing mosquitoes (Ghana) or were very fragile (Senegal)
- concerns that not enough nets were provided (Cameroon, Ghana) or that replacement nets were needed (India)
- client preferences for ITNs rather than indoor residual spraying (IRS) in IRS districts (Ghana)
- net recipient questions about how frequently to wash nets and with what soap (Cote d'Ivoire, Tanzania)
- net recipient preferences for conical nets (Namibia)
- net recipient concerns about side effects of ITNs (Niger)
- the challenges of net care given “rough” sleeping places (Uganda, Zimbabwe)

Constructive feedback provided on the SBC activities referenced the importance of timing of activities to align with net distribution (Zanzibar and India) and providing messaging in local languages (Pakistan). Ten per cent of respondents had said they had not received/sought any feedback.

All respondents were asked about plans for future SBC activities, including those who were not aware of any current activities. Fifty percent of respondents were aware of activities being planned. Fifteen percent of respondents said they were unsure about any plans, and ten percent said that no

plans were in place. At country level, three countries (Burundi, Gabon, and Yemen) reported no net care SBC plans going forward. In Burkina Faso, Central African Republic, Gambia and Somalia, respondents were unsure of plans, and in Brazil, Mali, Mozambique, Senegal and Togo, no respondents provided an answer. Overall, 22 countries (65 per cent) described specific plans or referenced communication strategies in place for future messaging on net care. Future plans largely committed to the continued development of SBC activities, materials and training, and to using a variety of activities and channels for dissemination.

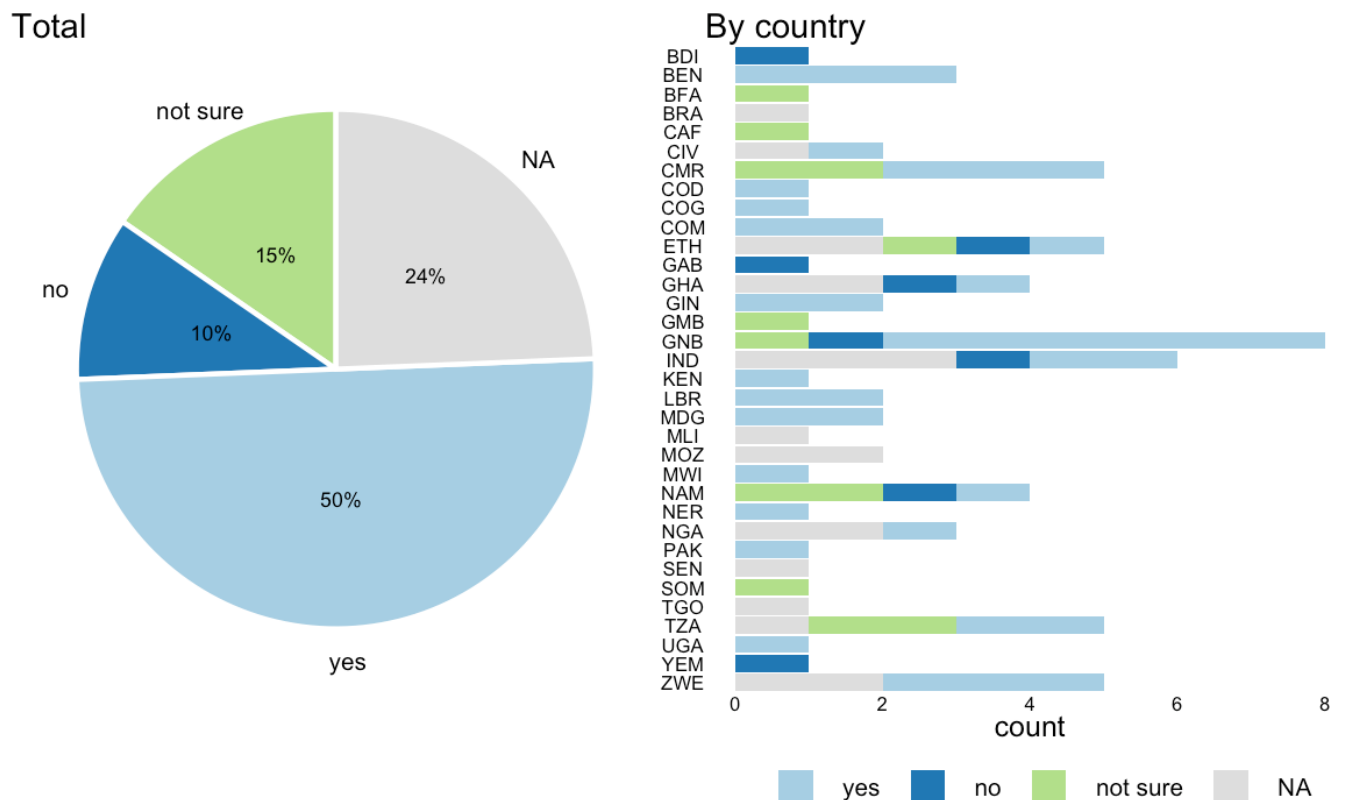


Figure 12: Future plans for net care SBC efforts for all respondents (left) and by country (right)

4 Discussion

The varying quality and coverage of responses provide a caveat to the findings presented in this discussion.

Findings show that countries responding to the survey are using a variety of layered approaches to net care SBC. Nearly all countries provided several different messages focusing on discouraging net misuse, prevention of holes and repair as the primary net care behaviours. Activities are conducted primarily during mass ITN campaigns. However, additional approaches are being employed to allow for frequent messaging through routine health services and activities such as ANC clinics and community-based health services.

It is worth noting here that responses to some key questions, such as coverage and timing of net care messages, showed some inconsistencies at country level. This was also the case for the level of detail provided for the qualitative questions around the types of approaches used, feedback received and plans for the future. Such inconsistencies are likely linked to the variety of job roles from respondents and the corresponding level of knowledge and access to information that they have. In terms of how messages are disseminated, the responses showed that countries tended towards layering and reinforcing communication efforts through multiple channels, using both interpersonal communications and media. Respondents highlighted interpersonal communication primarily in healthcare settings, followed by community and then education settings. A variety of approaches extended to mobilization via religious and community leaders and through mechanisms such as theatre and drama groups. Media focused on radio and print primarily, followed by social media, SMS and then TV. The theme that persisted across all countries was the layering of approaches through multiple dissemination channels.

Twelve countries provided an example of SBC materials that showcased messages focused on the importance of effective net use and instructions for good net care. The examples were primarily printed materials such as pamphlets and posters, with a few examples of communication guides, radio spots and TV messaging. This could show a preference for printed channels but, due to the small number of examples provided, this is more likely attributable to the ease of uploading print examples via the online survey. While the examples are useful to demonstrate the range of approaches and formats used to deliver key messages, further information would be required to better understand how print materials were used, and to develop case studies to support learning and future improvements for net care messaging.

Community-level feedback on the net care SBC activities was reported as largely positive, with 18 per cent reporting challenges or concerns of the community. While noting the small sample size, the reported challenges and concerns could be a useful area to explore to inform future net care messaging. For example, countries where concerns were noted around side effects of nets could take this into consideration for future SBC net care messaging campaigns. Other areas of feedback seemed to focus more on the nets themselves, regarding their quality, preferences and replacement requests, which could inform future work in that area.

Fifty percent of respondents were aware of future activities being planned and twenty-two countries provided references to specific plans or communication strategies in place for future messaging on net care. Future plans largely committed to continue development of SBC activities, materials and training, and to using a variety of activities and channels for dissemination, which could help reinforce the preferences for a variety of approaches and channels for dissemination shown in this survey.

4.1 Limitations

Triangulation of responses within countries was not possible for the 71 per cent of countries where only one or two responses were received. Twelve countries in Africa that were contacted did not provide a response, further limiting the ability to confirm continental trends. Not unexpectedly, the quality and consistency of responses varied in relation to the range of roles of respondents. Levels of awareness were most likely linked to the access to information they had in relation to their roles in the planning around ITN SBC with implementing partners, and national malaria programmes showing higher levels of awareness and familiarity with programme details. Overall, only 29 per cent of countries submitted responses from a national malaria programme SBC Officer, and 59 per cent from the national malaria programme Director or a Vector Control Officer. This means that

consistency varied within and for individual countries making it difficult to substantiate all responses at a country level. More direct follow-up with key stakeholders would be needed to enable a more consistent level of responses at a country level.

Further follow-up is required to understand the specifics of the approaches described and their impact, and to inform improvements for design and implementation of net care messages. While some examples were shared, the survey did not seek to thoroughly capture details of implementation, design and pretesting. However, there may be opportunities for follow-up in this area, which could be pursued to develop a series of short case studies for more extensive learning.

5 Conclusion

Despite the limitations regarding quality and coverage of responses, the survey shows that there are a variety of multi-level approaches being used for net care messaging by malaria-endemic countries. Messages are varied but seem to focus on discouraging alternative use and misuse of nets, and promoting net repair and prevention of holes. While activities were mainly conducted during mass campaigns, they were also frequently integrated into routine health services such as ANC clinics and community health services. Dissemination channels varied, using both interpersonal communication and media in health and education settings and at community level. Countries provided varying levels of detail about their specific activities. Further work could use the findings from the survey as an opportunity to follow up with countries and to develop more detailed case studies of how approaches were implemented to help inform future work on net care messaging.

6 Questionnaire

1. Name
2. Job title
3. Organization type
4. Country
5. Are you aware of any SBC efforts promoting net care (and/or repair) in the last two years in [country]?
6. What was the reach of these SBC activities for net care?
7. What were the key net care behaviours these messages were intended to address?
8. Were the net care SBC activities associated with a specific ITN distribution, or conducted more routinely?
9. What channels were used to disseminate the net care messages?
10. If possible, please tell us more about when and how often net care messages were distributed.
11. What feedback, if any, have you received from communities about the net care SBC activities?
12. Optional: please upload an example of net care messages mentioned earlier here
13. What (if any) plans are there to conduct SBC for net care in the coming year?

7 References

1. Koenker H, Kilian A, Hunter G, Acosta A, Scandurra L, Fagbemi B, et al. [Impact of a behaviour change intervention on long-lasting insecticidal net care and repair behaviour and net condition in Nasarawa State, Nigeria](#). Malar J. 2015;14:18.

2. Helinski MH, Namara G, Koenker H, Kilian A, Hunter G, Acosta A, et al. [Impact of a behaviour change communication programme on net durability in eastern Uganda](#). Malar J. 2015;14:366.