Testing Relevance of the Antenatal Care Client Segment Tool for Pregnant Women at Risk of Malaria

A Brief Guide

August 31, 2023

Table of Contents

Glossary

ANC	Antenatal care
ANC1	A client's first ANC visit
IPTp	Intermittent preventive treatment of malaria during pregnancy
ITN	Insecticide-treated net
MBS	Malaria Behavior Survey
NMP	National Malaria Program

1. Context

Malaria in pregnancy remains a significant health problem with critical risks for pregnant women and their babies. Health care provider interactions with pregnant women significantly impact whether and where women seek and receive services. Yet, antenatal care (ANC) services don't always cater to the unique needs of subgroups of women who seek care, including, for example, adolescent mothers or single mothers. Therefore, Breakthrough ACTION developed a psychosocial segmentation of women of reproductive age across several countries (Cameroon, Côte d'Ivoire, and Malawi) using Malaria Behavior Survey (MBS) data to analyze commonalities in attitudes and behaviors that may distinguish subgroups of ANC clients. The goal was to identify and segment subgroups of women to develop tailored counseling to meet the needs of each group, encourage ANC attendance, and ensure intermittent preventive treatment of malaria during pregnancy (IPTp) is administered.
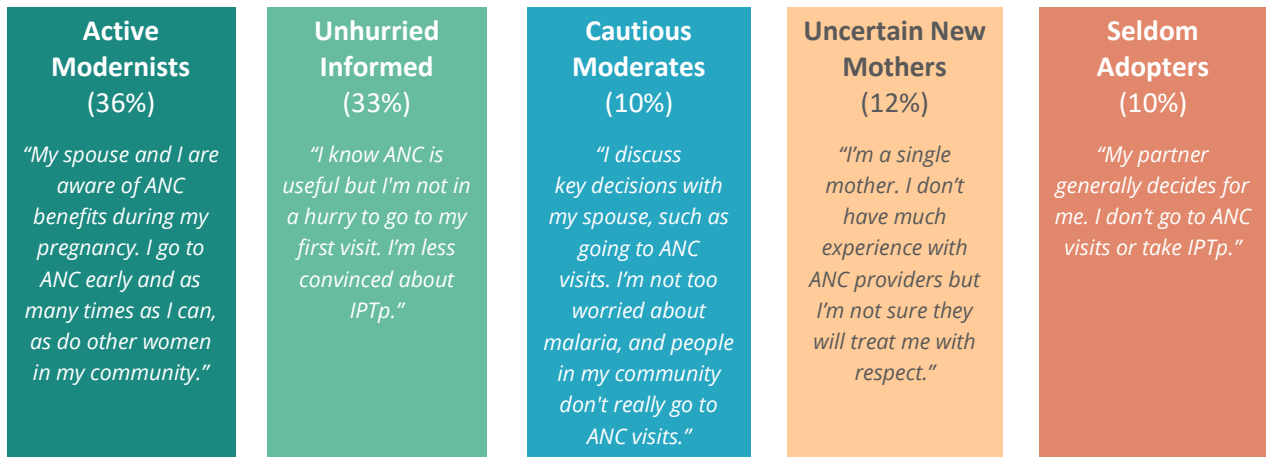
Breakthrough ACTION then developed a counseling tool to support health care providers so they can quickly identify the segment of the client they are counseling in any given service interaction and adapt their approach and messaging based on that segment's characteristics and facilitators for behavior change. The project developed two versions of the tool: the main version for use in facilities and a second, more visual version for potential use in community settings (pretesting for this version is in progress).

This document provides high-level, simplified guidance on testing and adapting the counseling tool for local contexts. It guides users in involving their community to determine how closely the segments align and how to uncover additional country-specific factors that may challenge or bolster the segmentation.

2. Benefits of Audience Segmentation

Audience segmentation is a tool to better understand the nuanced differences within a given population so that social and behavior change programming can be tailored effectively.[1] It provides insights that describe the who, what, and why of human behavior around a particular topic so individuals can be provided with the right interventions and strategies to incite change.[2] This segmentation effort of ANC clients examined attitudes, behavioral elements, and demographic variables. A segment refers to people with similar behaviors, attitudes, and beliefs. It is often presented through a fictional persona to help understand a person who typically fits within that segment more easily. Several benefits to applying segmentation within SBC programming focused on ANC clients include the following:

- Greater understanding by health care providers of the factors influencing women's ANC and IPTp behavior, making for more positive, empathetic provider-client interactions.
- Tailored, focused counseling for each ANC client segment, increasing the likelihood that their barriers and concerns around ANC will be addressed.

Active Modernists (36%)	Unhurried Informed (33%)	Cautious Moderates (10%)	Uncertain New Mothers (12%)	Seldom Adopters (10%)
"My spouse and I are aware of ANC benefits during my pregnancy. I go to ANC early and as many times as I can, as do other women in my community."	*"I know ANC is useful but I'm not in a hurry to go to my first visit. I'm less convinced about IPTp."*	*"I discuss key decisions with my spouse, such as going to ANC visits. I'm not too worried about malaria, and people in my community don't really go to ANC visits."*	*"I'm a single mother. I don't have much experience with ANC providers but I'm not sure they will treat me with respect."*	*"My partner generally decides for me. I don't go to ANC visits or take IPTp."*

3. ANC Client Segments

The segmentation analysis based on MBS data revealed five groups of ANC clients with specific attitudes and behaviors regarding ANC and IPTp, highlighted below in fictional personas.

The factors and barriers that shaped the segments included:

- Spousal/partner influence in decision-making regarding attending ANC visits.
- Social norms related to perceptions of how many women in the community take preventive care and attend regular ANC visits.
- Trust in ITNs.
- Trust in IPTp.
- Perception of health workers within health facilities.
- Perception of the risk of malaria for pregnant women.

More details about the segments are available [Malaria Antenatal Care Client Segmentation: Report on the Secondary Analysis of Malaria Behavior Survey Data in Three Countries](#).

4. Intervention: Malaria ANC Segmentation Counseling tool

As a result of the segmentation analyses, an ANC counseling tool was designed as a programmatic intervention for health care providers. It enables health care providers to better understand the background of a typical client within a given segment. It helps them focus on the client's most relevant factors of concern.

At the first ANC visit (ANC1), health providers will administer the counseling tool will be administered and identify and record the client's segment. They will then proceed with tailored counseling for the

client, based on the characteristics of the client's segment. In subsequent visits with the client, providers can choose to reinforce only the key messages for the client's identified segment.

The ANC counseling tool has two key components. The first is a **segment identification tool** that asks questions to determine which of five sociobehavioral segments a pregnant woman at risk for malaria belongs to. The second part includes a counseling guide and tool with **discussion prompts** and **tailored messages** for each segment. The counseling guide will help the provider conduct tailored counseling for each client so they will increase the uptake of positive behaviors that protect against malaria during pregnancy and address challenges related to those behaviors. The guide and tool acknowledge the unique psychosocial barriers and facilitators associated with ANC attendance and IPTp uptake for each segment, while supporting providers in addressing unique concerns.

5.   Adapting the ANC Counseling Tool

A first step for testing the relevance of this tool is considering whether the segments apply in the context in which you work. Reviewing the characteristics of each segment with the National Malaria Program (NMP) and other malaria stakeholders leverages contextualized knowledge of the factors influencing pregnant women's ANC attendance and IPTp uptake.

To assess the relevance of these segments in your country, we recommend sharing this malaria ANC segmentation with the following entities to gather their input.

- Health professionals working in malaria; maternal, newborn, and child health; and reproductive health.
- Health care providers who conduct ANC counseling.
- Local implementing partners (when relevant).

This step assesses if the factors influencing segment behaviors resonate with malaria stakeholders.

After sharing with relevant stakeholders, when the segmentation findings and segments characteristics resonate with key stakeholders, countries can refer to Section A. Light Adaptation Guidelines for the ANC Segmentation Counseling Tool. For countries where the segmentation insights and segment findings do not resonate, conducting further quantitative research may be necessary to uncover the ANC client segment within the population. These countries can refer to Section B. Complementary Research When Segmentation Does Not Apply to Country Context.

A. Light Adaptation Guidelines for the ANC Segmentation Counseling Tool

If any or all the characteristics are applicable and you want to see if additional country-specific factors arise, conduct qualitative research with women identifying with each ANC client segment. Inquire about the key factors that make the segments distinct and any factors uncovered during the review of

segments with the NMP. Update information in the counseling tool with your findings, tweak segment characteristics and counseling prompts, and add any new information highlighting additional opportunities for behavior change.

Once the factors from a given country are reviewed and the guide updated, NMP and other malaria stakeholders may introduce the counseling tool. Table 1 walks through the steps for adaptation in more detail.

TABLE 1. STEPS FOR ADAPTATION	
ADAPTATION STEPS	DESCRIPTION
1. **Explore country-specific nuances** through qualitative research. • Use the segment identification tool to identify women for focus groups and in-depth interviews across each segment (Appendix). • Analyze the outputs of the focus groups and identify common themes between the ANC segmentation and any country-specific factors. • Adjust the counseling guide to reflect your segments better. 2. **Adapt the counseling tool messages to the country ANC and IPTp national guidelines and the country context.**	Conducting qualitative research is an important step before using the segmentation tool to confirm the factors influencing each segment behavior and uncover any country-specific factors. • Conduct dedicated focus groups with selected women to discover each segment-specific characteristic in your country. Recruit four to six women from each segment and conduct at least one focus group per segment. • Recruitment of women across each segment can be performed using the segment identification tool presented in the Counseling Guide for Antenatal Care Client Segments. • Conduct focus group discussions and interviews with each segment of women to test if the factors driving the segments behavior are similar in your country and explore if other factors exist. This will help reinforce drivers of women's behaviors for ANC and IPTp in your country and have additional evidence for programming. • Update each segment description and reflect the change in the counseling tool cards to account for additional country-specific factors.

B. Complementary Research When Segmentation Does Not Apply to Country Context

Implementers may run a new segmentation analysis if the factors associated with the established segments do not resonate with the local NMP.

If MBS data is available, the NMP may consider conducting a secondary analysis to identify which country-specific factors influence ANC and IPTp behaviors.

You can do this by running a Chi-square correlation between the outcome variables used to develop this segmentation tool and all the other MBS variables to identify the outcome variables with a "statistical significance" to the outcome variables used for this segmentation. Software that can perform the

calculations include RStudio (Posit Software, Boston, MA) or SPSS Statistics (IBM, Armonk, NY). Then, create a new segment identification tool using a Chi-square automatic interaction detector decision tree algorithm on the MBS dataset that will flag the variables vital for identifying an individual's segment in actual life. Assistance from the national statistical institute or a statistician can help conduct these analyses. If MBS data is not available, other data sources may be able to inform the process. After you define new segments, develop a counseling tool using the Counseling Guide for Antenatal Care Client Segments for Facility-Based Use as an example.

For the segment-specific content, include the key characteristics and defining factors identified during the segmentation analysis in the top portion of each card labeled *ANC and Malaria in Pregnancy Characteristics*. For the discussion prompts, consider what positive behaviors to reinforce and what behaviors or perceptions need to be addressed to encourage behavior change.

TABLE 2. SEGMENT-SPECIFIC CONTENT	
ADAPTATION STEPS	DESCRIPTION
[*Only when segment characteristics do not align with the local context*]	If the segment factors and characteristics do not align with your local context, if your country has an MBS dataset, consider running another segmentation analysis if time and resources allow.

6. Rollout Within Health Facilities

Once you have gathered additional evidence about country-specific characteristics, you can use the segmentation and the counseling tool in your country through the following process.

- Translate the tool into the relevant local language(s) to ensure it is accessible to all health care providers and clients.
- From there, pretest the tool in a facility with a group of six to 10 providers to collect feedback and role-play the use of the translated version. Several role-plays are often necessary to assess ease of use by the providers, identify context-specific inputs to adjust (e.g., administration of IPTp at home or facility in the country), and identify gaps in the translated version of the tool.
- Following the pretest, pilot the tool for three to six months in a subset of health facilities. This will enable providers to get used to the tool and measure its impact on ANC counseling and IPTp uptake before scaling it nationally. Before launching the pilot, it is critical to define a monitoring and evaluation framework and a training process to introduce and present the tool to providers within each facility. The tool can be embedded in existing planned training to reduce costs. During the pilot phase, an implementer should provide supervision to monitor providers' use of the counseling tool and see how it works through frequent feedback and discussion. This enables consistent monitoring of the tool's impact across several facilities and health districts/regions.

Conclusion

This high-level guidance is meant to support the adaptation of the ANC segments within any country. Given how essential health care provider interactions are for pregnant women during ANC services, the goal is to ensure that a wide range of health providers can quickly identify the segment of clients they are counseling and counsel accordingly. This will support better client outcomes and, ideally, improve a client's experience of care.

References

1. Evans, W. D., Thomas, C. N., Favatas, D., Smyser, J., & Briggs, J. (2019). Digital segmentation of priority populations in public health. *Health Education & Behavior, 46*(2_suppl), 81S-89S. https://doi.org/10.1177/1090198119871246
2. Smith, R. A. (2017, March 29). Audience segmentation techniques. *Oxford Research Encyclopedia of Communication*. https://doi.org/10.1093/acrefore/9780190228613.013.321

Appendix: Malaria ANC Qualitative Research

Illustrative Discussion Guide for Focus Groups and Interviews

1. **Introductions and Expectations**
   A. Ask each person to share something, for example: How many children do you have? What types of activities do you enjoy?
   B. Tell them why we are here: "We want to understand your experience, opinions, challenges, and needs around seeking antenatal care (or ANC) during pregnancy and preventive malaria care during pregnancy. We make no assumptions or judgments and have nothing to promote: no agenda or product. We want to hear from you on these matters. We are here to listen and learn."

2. **Perceptions of ITNs and Malaria Treatment**
   A. What is the biggest challenge around regularly sleeping under a treated net in your household?
   B. What has been your experience with malaria preventive treatment drugs during your previous pregnancy?
   C. Where did you get the preventive malaria treatment from?

3. **Social Norms**
   A. Do people in your community use treated nets regularly? Why or why not?
   B. Do women in your community attend ANC visits regularly (at least four times during the pregnancy)? Why or why not?
   C. Do women in your community take preventive malaria treatment (Three or more doses of preventive medicines for malaria IPTp)? Why or why not?

4. **Spouse/Partner Influence**
   A. Do you discuss your pregnancy with your spouse/partner?
   B. If yes, how often do you discuss attending ANC visits together? Is your spouse/partner supportive of attending ANC visits?
   C. Who decides to make ANC visits in your household? (Self, spouse, or joint decision)
   D. Do you discuss taking preventive malaria treatment during pregnancy with your spouse?

5. **Segment-Specific Questions (15 min)**
   A. Active Modernists
      i. How important is it to you to attend ANC visits early and regularly?
      ii. How worried are you about malaria for you and your child during pregnancy?
      iii. What might prevent you from taking preventive malaria treatment (preventive medicines for malaria, or IPTp) during pregnancy?
   B. Unhurried Informed
      i. What might prevent you from going to the health facility as soon as you think you might be pregnant?
      ii. Sometimes, do you attend ANC visits with your spouse/partner? Why or why not?

       iii.   What is your opinion of preventive malaria treatment antimalarials? Do you often complete preventive treatment?

C. Cautious Moderates

       i.   How worried are you about malaria for you and your child during pregnancy? What could be the health risks associated with malaria during pregnancy?

       ii.   What is your opinion of health workers in the facility? What was your experience during your last pregnancy?

       iii.   What is your opinion of rapid diagnostic tests? Do you think that they are always reliable? Why or why not?

D. Uncertain New Mothers

       i.   What is your opinion of health workers in the facility? What was your experience during your last pregnancy?

       ii.   Do you often go to the health facility without your spouse/partner? Why or why not?

E. Seldom Adopters

       i.   How often does your spouse decide whether to attend ANC visits?

       ii.   What is your opinion of ITNs? Do you think that they are always effective? Why or why not?

       iii.   What might prevent you from going to the health facility as soon as you think you might be pregnant?

6. **Closing**

A. Are there any last things you'd like to say, share, or make sure we hear? Any last thoughts?

B. Thank everyone for coming and participating.