

Segmenting Malaria Health Providers

A Technical Brief

July 31, 2023

PMI

**U.S. PRESIDENT'S
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FOR SOCIAL & BEHAVIOR CHANGE



1. Context

According to the Blueprint for Applying Behavioral Insights to Malaria Service Delivery,¹ health provider behavior greatly influences malaria treatment and care. It can represent significant obstacles or avenues for improving malaria service provision. Two critical components of malaria service provision that providers are responsible for include (1) proper identification of suspected malaria cases and (2) ensuring that treatment is parasite-based. However, due to a need for more trust in antimalarials and rapid diagnostic tests (RDTs), providers have faced challenges adhering to clinical guidelines for malaria services. Furthermore, assessments suggest that health providers often give Artemisinin-based combination therapies even to health facility clients that test negative for malaria.

While those in the malaria field need to address provider behaviors that contribute to incomplete or inconsistent malaria service delivery, this cannot happen effectively without first understanding the underlying factors driving such behaviors, both within and beyond the health providers' control. By exploring the factors driving provider performance on critical components of malaria service provision (e.g., diagnosis, treatment, and service quality), programs can develop tailored recommendations for different groups of providers with different attitudes, ultimately to shift their behavior.

To deepen understanding of factors influencing providers' performance in malaria service provision and service quality, Breakthrough ACTION conducted a psychosocial segmentation analysis using latent class techniques. Using quantitative health facility survey data from Guinea (2018) and Uganda (2014), the project conducted secondary research to understand the drivers of provider behaviors regarding adherence to malaria guidelines and quality of services. That analysis identified the key variables to include in the segmentation analysis, including health providers' attitudes, perceptions of norms, and behaviors towards training, supervision, malaria service guidelines, and service quality. These factors enabled the project to conduct a latent-class analysis that uncovered four sub-groups of health providers with specific attitudes, needs, and behaviors. The segments vary significantly regarding trust in tests, use of clinical judgment, resource exposure, and perception of social norms.

Four segments emerged from the data analysis, highlighting key differences in each group based on their attitudes and perception of norms around malaria service provision and service quality. Specific characteristics of each segment are described in Table 1.

¹ Breakthrough ACTION and PMI Impact Malaria. (2020). *A Blueprint for Applying Behavioral Insights to Malaria Service Delivery: Methods and Frameworks for Improving Provider Behavior*. Baltimore: Johns Hopkins Center for Communication Programs

Higher Performers [HP] <i>"I know malaria test results are accurate, and I rely on them for diagnostic and treatment."</i>	Pragmatics [PR] <i>"I trust malaria tests, but it can't hurt to give antimalarial even when the test result is negative."</i>	Overconfidents [OC] <i>"I trust my expertise most; I don't need to rely on tests to diagnose and treat patients for malaria."</i>	Lower Performers [LP] <i>"I don't trust malaria tests, and I don't feel the need to rely on them overly."</i>
<ul style="list-style-type: none"> • Cares strongly about the quality of service. • Performs high-on-service provision. • Has high trust in malaria tests. 	<ul style="list-style-type: none"> • Cares about quality of service. • Adheres to guidelines on service provision. • Trusts malaria tests. 	<ul style="list-style-type: none"> • Doesn't prioritize client's perception of quality of service. • Average performance on diagnosis. • Doesn't trust malaria tests. 	<ul style="list-style-type: none"> • Doesn't prioritize client's perception of quality of service. • Doesn't meet guidelines on service provision. • Doesn't trust malaria tests. • Doesn't believe other providers meet the guidelines.

Table 1: Provider Segment Characteristics

Following the quantitative analysis, Breakthrough ACTION developed the provider Segment Identification Tool in Section 3 of this document to identify the segment a given health provider belongs to, transforming the segmentation analysis from descriptive research to a tool with practical utility. The provider Segment Identification Tool was used in Guinea to identify providers from each segment for participation in focus groups.

In July 2022, Breakthrough ACTION conducted eight focus group discussions in Conakry, Guinea and Coyah, Guinea (two per segment), in which 55 participating health providers (nurses, doctors, and midwives) shared their thoughts on the segment profiles and discussed potential interventions for behavior change. The findings from these focus groups enriched and supplemented the profiles derived through quantitative analysis. They also enabled a deeper understanding of the structural and environmental factors influencing provider behavior that was not reflected by variables in the health facility survey datasets.

After incorporating feedback from the focus groups to the segment profiles, in September 2022, the project held a virtual workshop to test the segment profiles and brainstorm interventions with representatives from seven organizations working on malaria in Guinea.

2. Objective of the Segment Identification Tool

The Segment Identification Tool aims to enable malaria social and behavior change (SBC) and service delivery practitioners to better support malaria health providers in facilities. This tool will enable practitioners to optimize quality improvement approaches through a better understanding of drivers of provider behavior and to increase provider adherence to malaria guidelines and higher quality of services.

Once National Malaria Programs and partners identify the segment of a health provider, the profile descriptions can be used to get a clearer sense of the factors driving provider behavior and craft tailored behavior change interventions that tackle critical components of malaria service provision performance. Better-supported providers will contribute to higher quality, more precise malaria service delivery that adheres to guidelines and better meets the needs of their client populations.

This tool can be used within existing quality improvement interventions, including supportive supervision, as deemed most useful in any given country context. When deciding when to use this tool, it is helpful consider what ongoing quality improvement approaches are used in a particular setting, and where further improvements may still be helpful. For example, a country can use existing data to see which health facilities may still be lagging regarding adherence to the national malaria guidelines. Where facilities are performing well, this tool may not be needed. However, following application of existing quality improvement tools and where they are not yielding the intended results, this tool may serve as a complement to further focus in on segments that may inhibit a particular lower performing facility from improving. For facilities that do not show improvement between supportive supervision visits, for example, the tool may add another dimension to enable users to dig deeper into understanding which segments may still be struggling. In such facilities that remain low-performing, the tool can prove useful at the beginning of a supportive supervision visit to identify the segments and then use that information for follow up to support those segments in need of further support. When discussed in Guinea, for example, stakeholders felt that ongoing coaching could take place after an external supportive supervision visit with the lower performing segments after they had been identified. There is no one size fits all for the use of this tool, as users must situate it within a given country context and within existing quality improvement approaches to ensure the best fit.

Section 4 of this document recommends specific actions to help programs improve each provider segment's behavior. After using the Segment Identification Tool, SBC practitioners and implementing partners should consider which recommendations are relevant to action steps for their context. Finally, if they have the resources to do so, practitioners and implementers can also conduct additional research to understand the country and context-specific barriers and opportunities for malaria service providers in their communities.

3. Malaria Health Provider Segment Identification Tool

Malaria Health Provider Segment Identification Tool	
Overview	Read this section thoroughly <i>before</i> utilizing the Segment Identification Tool. If possible, practice with another SBC practitioner or colleague before profiling a malaria health provider. This Segment Identification Tool can support SBC and service delivery implementers in identifying the segment of health providers to design and implement more tailored interventions.
Methodology	The questions in the tool came from the health facility survey datasets as the best questions to explain and indicate what segment each health provider belongs to. The selection was conducted using a Chi-squared Automatic Interaction Detector analysis in SPSS Statistics (IBM, Armonk, NY).
Tool Instructions	<ol style="list-style-type: none"> 1. Explain the purpose before beginning the interview: “Today, I will ask you a series of questions to help me understand the needs of health providers that conduct malaria services. After I ask each question, I will state the acceptable answer choices. Choose the answer that best matches your experiences with malaria diagnosis and treatment. I make no assumptions or judgments and want to hear from you on the following matters. There is no right or wrong answer.” 2. Review the Segment Identification Tool Questionnaire on the next page. This tool targets health providers that work with potential malaria cases. The tool begins with question 0 (Q0) to ensure the interviewer is identifying a malaria health provider. If the answer to Q0 is “Yes,” proceed with the interview by going to Q1. If the answer to Q0 is “No,” then end the discussion and thank the interviewee for their time and answers. 3. After asking each question, state the acceptable answer choices for the interviewee (for example: “Yes, Unsure, or No”). 4. In brackets next to each answer choice is <i>either</i> an acronym representing the determined segment (For example: “[LP]”) or a directive to proceed to another question (indicated in brackets). Once you determine the segment, end the interview, and thank the interviewee for their time and answers. Record the provider segment in the personnel file for future use, such as mentoring pairing or peer group discussion activities. 5. Interviewers can use the Segment Identification Tool again after providers have been exposed to different interventions that may improve their performance. This can help assess whether the provider remains in the same segment group or moves to another.

Table 2. Malaria Health Provider Segment Identification Tool Instructions

Segment Identification Tool Questionnaire	
Q#	Question
Q0.	<p><i>Do you provide counseling and treatment for malaria services at your health facility?</i></p> <ol style="list-style-type: none"> 1. Yes. [Proceed to Q1] 2. No. [End interview; this tool applies only to providers offering malaria services]
Q1.	<p><i>Do you believe that the clinicians in your health facility use a malaria test for all patients with a fever?</i></p> <ol style="list-style-type: none"> 1. Yes. [Proceed to Q2] 2. No. [LP]
Q2.	<p><i>If a malaria test is negative, should the person still be treated if your clinical judgment makes you suspect they might be positive for malaria?</i></p> <ol style="list-style-type: none"> 1. Yes. [Proceed to Q3] 2. Unsure/Sometimes. [Proceed to Q3] 3. No. [Skip to Q4]
Q3.	<p><i>To what extent do you agree or disagree that malaria tests are trustworthy?</i></p> <ol style="list-style-type: none"> 1. Strongly Agree. [PR] 2. Agree. [PR] 3. Disagree. [OC] 4. Strongly Disagree. [OC]
Q4.	<p><i>To what extent do you agree or disagree that providing high-quality malaria services for patients is important?</i></p> <ol style="list-style-type: none"> 1. Strongly Agree. [HP] 2. Agree. [Proceed to Q5] 3. Disagree. [LP] 4. Strongly Disagree. [LP]
Q5.	<p><i>To what extent do you agree or disagree that the patients that come to your health facility appreciate the services they receive?</i></p> <ol style="list-style-type: none"> 1. Strongly Agree. [HP] 2. Agree. [PR] 3. Disagree. [LP] 4. Strongly Disagree. [LP]
<p>Segment Codes:</p> <ol style="list-style-type: none"> 1. HP: Higher Performers 2. PR: Pragmatics 3. OC: Overconfidents 4. LP: Lower Performers 	

Table 3. Malaria Health Provider Segment Identification Tool Questionnaire

4. Programmatic Opportunities

Breakthrough ACTION tested the Segment Identification Tool through focus group discussions with each segment of providers in Guinea in July 2022. The project used the Segment Identification Tool to recruit six to eight health providers for each segment, and the focus group discussions deepened understanding of the factors influencing the behavior of each segment of providers. Following the focus group discussions, Breakthrough ACTION held a co-creation workshop with stakeholders in the malaria community in Guinea, including representatives of the Ministry of Health and implementing partner (IP) organizations. The brainstorming produced suggested opportunities to integrate the providers segmentation through the malaria case management journey (Figure 1) and use the segmentation systematically across health facilities and national levels (Figure 2). Using the Segment Identification Tool to identify health providers in each segment, stakeholders can then choose intervention opportunities described in the figure below to further inform a country’s programming.

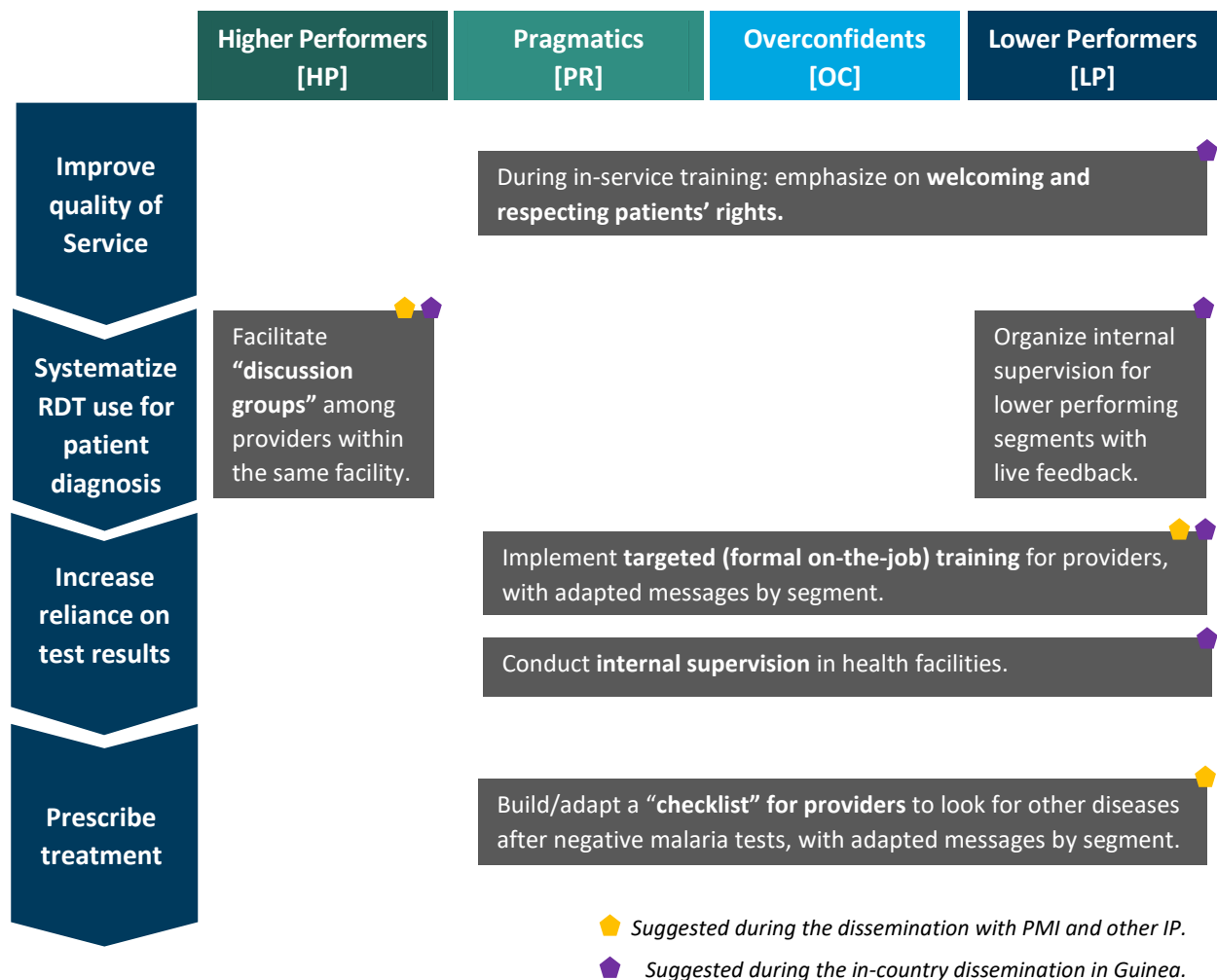


Figure 1. Opportunities to Integrate the Providers Segmentation Through the Malaria Case Management Journey

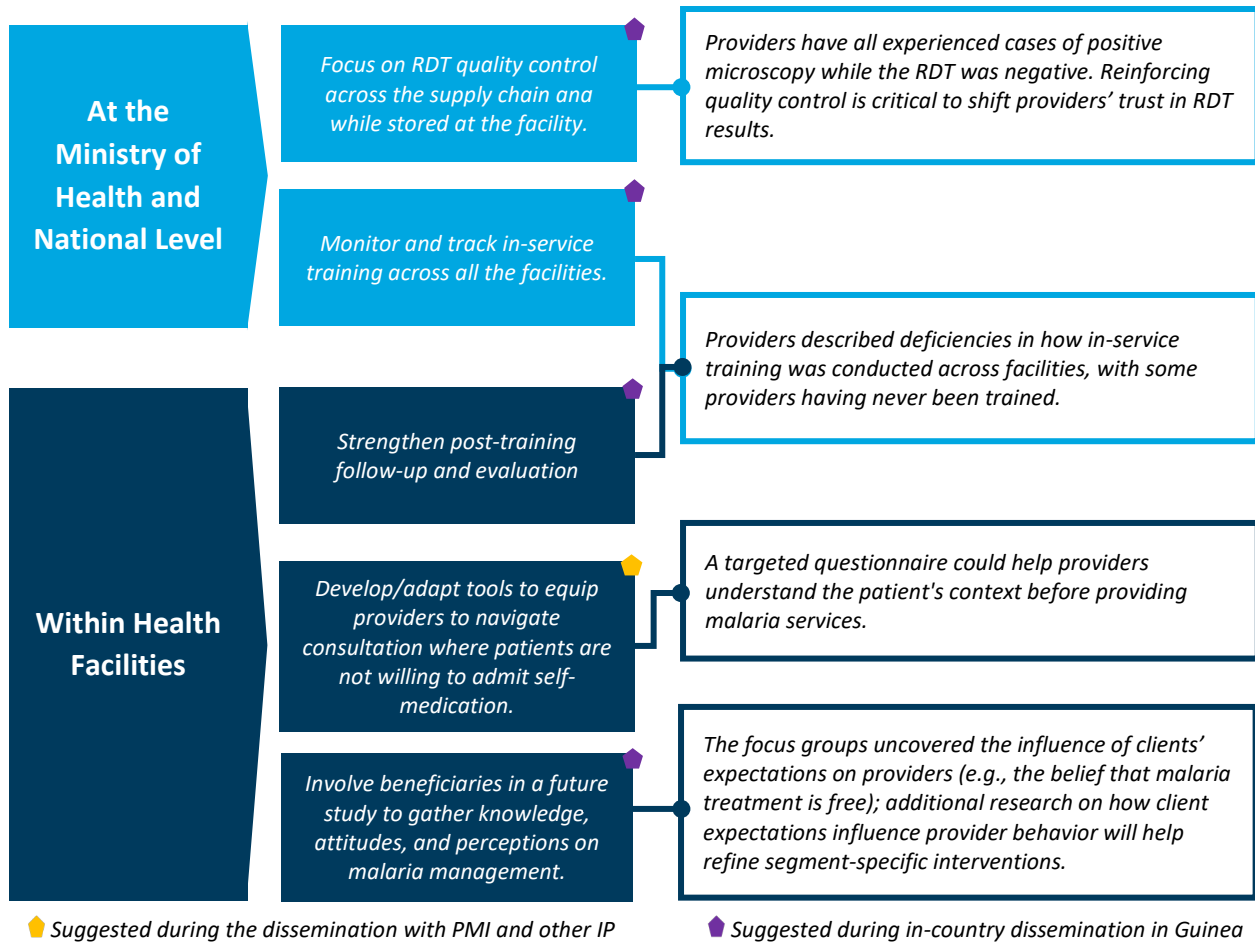


Figure 2. Ways to Use the Segmentation Systematically Across Health Facilities and at National Levels

5. Value of Segmentation in Quality Improvement

As more countries roll out health facility surveys and gather even more data about the quality of their services, conducting a segmentation analysis with that data can be valuable. Just as the project did this during the segmentation analyses that informed this tool, the exercise can be crucial for National Malaria Programs as well as SBC and service delivery practitioners to center not only on behaviors of different providers but importantly on the factors driving those behaviors. Audience segmentation—a technique that divides a population into groups with similar characteristics related to a topic of interest—allows for a deeper understanding of the myriad factors that drive behaviors. Audience segmentation can help National Malaria Programs and implementers to develop interventions tailored to each specific group’s needs and the Segment Identification Tool can be useful in country settings where additional approaches may add value.

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