# Table of Contents

Executive Summary .................................................................................................................... 3

Acronyms .................................................................................................................................. 6

Purpose ....................................................................................................................................... 7

Background ................................................................................................................................ 7

Methodology ............................................................................................................................... 8

Objective ..................................................................................................................................... 8

Stakeholder Identification ......................................................................................................... 8

Data Collection .......................................................................................................................... 9

  Qualitative Data ....................................................................................................................... 9

  Confidentiality Guarantee ....................................................................................................... 10

Qualitative Results .................................................................................................................... 10

Policy .......................................................................................................................................... 10


  Stakeholder perspectives on the NMS reduction target ......................................................... 11

  Perspectives on moving towards pre-elimination ................................................................. 12

Governance .................................................................................................................................. 13

  Political Commitment ............................................................................................................. 13

  Partnership and Collaboration ................................................................................................. 13

Financing ..................................................................................................................................... 13

  Donor Financing ...................................................................................................................... 14

  Domestic Financing ................................................................................................................ 14

Planning and Operations ............................................................................................................. 14

  Vector Control ......................................................................................................................... 15

  Case Management ................................................................................................................ 15

  Human Resources .................................................................................................................. 16

  Surveillance System ............................................................................................................... 17

  Supply Chain and Logistics .................................................................................................... 18

Evidence Base ........................................................................................................................... 18

Tool Development ..................................................................................................................... 18

Conclusions and next steps ........................................................................................................ 19

Appendices ................................................................................................................................ 21
Appendix 1: Stakeholder Interview Questions ................................................................. 21
Appendix 2: Stakeholder Overview .............................................................................. 23
Executive Summary

Introduction to project
In 2014, PATH MACEPA conducted a stakeholder analysis in Kenya to assess the perceptions of key stakeholders in malaria policy and implementation decision-making around what is needed to accelerate progress toward Kenya’s national malaria reduction targets, opportunities and barriers to increasing the prominence of malaria on the national health agenda, and readiness to introduce and scale new tools and approaches to accelerate efforts. The analysis findings are intended to inform policies and plans to further the reduction and elimination of the malaria burden in Kenya.

Context
Kenya has an estimated population of 43.2 million people, approximately 80% of whom are at risk for malaria. The coastal regions and areas surrounding Lake Victoria make up the highest risk areas. Approximately 21% of outpatient consultations and 3–5% of hospital admissions are due to malaria each year, with Plasmodium falciparum the most common source of infection. Kenya’s government places a high priority on malaria control, and the National Malaria Strategy (NMS) 2009–2017 outlines strategies focused on scaling up malaria control and laying the groundwork for realizing the vision of a “malaria-free Kenya”.

Methodology
Stakeholder interviews: 13 semi-structured face-to-face interviews were conducted in Kenya with stakeholders in November 2014. Stakeholders represented organizations and individuals with varying perceptions on malaria policy and implementation, and were selected based on known expertise and involvement in decision-making and implementation of malaria activities in Kenya.

Stakeholders represent three categories: 1) decision-makers who have the ability to directly or indirectly impact the design of the NMS, 2) implementers, who play the crucial role of operationalizing the NMS, and 3) adopters, who manage the implementation and realization of the NMS at the district and facility levels. A majority (11 out of 13) of the stakeholders interviewed were adopters working in Siaya County.

Qualitative analysis: Interview data was coded according to major themes that emerged across interviews and analyzed using thematic content analysis. Analysis findings are presented according to the analytical framework developed by the Bill and Melinda Gates Foundation (BMGF), which posits that six “building blocks” – policy, governance, financing, planning and operations, evidence base, and tool development – must be in place to accelerate efforts towards malaria elimination.

Stakeholder perspectives on the current strengths and areas for improvement in Kenya are summarized in the following table aligned to the six building block categories.

---

1 PMI Kenya Malaria Operational Plan 2015
2 PMI Kenya Malaria Operational Plan 2015
3 Kenya National Malaria Strategy 2009-2017
Kenya Stakeholder Analysis

<table>
<thead>
<tr>
<th>Building Blocks</th>
<th>Stakeholder perspectives: Strengths</th>
<th>Stakeholder perspectives: Areas for Improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Policy: a supportive policy environment and an existing framework to facilitate national decision-making. Sufficient data, knowledge, and access to information for decision-makers to sufficiently support changes in policy, strategy, and guidance on malaria efforts.</td>
<td>• Reduction targets are more feasible following the creation of Community Health Volunteer (CHV) and Community Health Extension Worker (CHEW) networks.</td>
<td>• Current goal is not ambitious enough; need National Malaria Strategy (NMS) goals that strive to achieve a more drastic reduction on a faster timeline. • Re-orientation of policy to focus malaria interventions targeting the highest-burden areas.</td>
</tr>
<tr>
<td>Governance: sense of national ownership and commitment to the country’s malaria initiatives. Defined architecture to ensure coordinated planning and implementation. The exercise of political, economic, and administrative authorities in the management of malaria efforts at all levels. Support or engagement in regional collaboration and cross-border initiatives focused on malaria.</td>
<td>• Increased decision-making power at the local level following devolution, improving local monitoring and managing of activities.</td>
<td>• Improved clarity between national and local leaders about roles and responsibilities following devolution. • Increased national support for county leaders to carry out increased responsibilities following devolution. • Increased engagement of community leaders to influence county governments to increase support and improve efficiency of control activities. • Increased partnership and collaboration among partners at the county level.</td>
</tr>
<tr>
<td>Financing: long-term commitment of domestic funds from national programs for malaria efforts. External donor willingness to support approved tools and interventions. General understanding of total cost required for effectiveness.</td>
<td>• Case management with effective diagnosis and treatment is well supported and financed by donors and partners.</td>
<td>• Increased national funding allocated to county leadership in order to implement intervention activities. • Sustained donor funding in light of governance challenges. • Increased domestic commitment towards financing vector control commodities. • Funding gap for IRS.</td>
</tr>
<tr>
<td>Planning and Operations: adequate manufacturing, infrastructure, and human resources to implement malaria control and elimination efforts. Specific plans for scale-up of new approaches, products, and strategies. Realistic timeline for country-wide implementation.</td>
<td>• Improved case management through CHEW and CHV networks. • High bednet coverage. • Utilization of community leaders and communication tools such as radio talks to dispel myths contributing to improper bednet use. • RDTs are easy for CHVs to use and are increasing diagnostic access. • Routine reporting of malaria case data.</td>
<td>• Improve proper use of bednets through additional behavior change communication campaigns. • Improve proper testing of malaria with the use of RDTs. • Increase access to microscopy. • Improve patient compliance with ACT regimens. • Strengthen human resources through increased staffing, training, and supervision. • Reduce delays in timely distribution of malaria commodities to health facilities. • Additional data on commodity quantities added to surveillance data reporting.</td>
</tr>
<tr>
<td>Evidence Base: sufficient data to support current strategy and approaches and/or to guide future policy changes.</td>
<td>• Accurate evidence shared to decision-makers around safe insecticides for IRS,</td>
<td></td>
</tr>
</tbody>
</table>
in order to minimize stigma and fear around IRS implementation.

- Strengthening of drug resistance monitoring.
- More data on DHA-p to determine if it should be added to national treatment guidelines as a first-line treatment in Kenya.

<table>
<thead>
<tr>
<th>Tool Development: necessary product development for new tools.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Next Steps</strong></td>
</tr>
<tr>
<td>This initial Kenya stakeholder analysis report and its supporting qualitative data will serve as a baseline for PATH MACEPA’s ongoing analysis of the enabling environment for national malaria policy and implementation efforts. The findings from the stakeholder analysis report will be used to identify challenges and opportunities – technical, financial, and operational – to accelerate Kenya’s progress toward national reduction targets.</td>
</tr>
</tbody>
</table>
Kenya Stakeholder Analysis

Acronyms

ACT  Artemisinin-based combination therapy
AL   Artemether lumefantrine
BMGF Bill & Melinda Gates Foundation
CHEW Community Health Extension Worker
CHV  Community Health Volunteer
DFID Department for International Development, UK
DHA-p Dihydroartemisinin-piperaquine
DHIS2 District Health Information System
G6PD Glucose-6-Phosphate Dehydrogenase Deficiency
Global Fund Global Fund to Fight AIDS, Tuberculosis and Malaria
IRS  Indoor residual spraying
KEMSA Kenya Medical Supplies Agency
LLINs Long-lasting insecticide treated nets
MACEPA Malaria Control and Elimination Partnership in Africa
MDA  Mass Drug Administration
MEC-WK Malaria Elimination Consortium- Western Kenya
MTAT Mass Test and Treat
NMCP National Malaria Control Program
NMS  National Malaria Strategy
PMI  President's Malaria Initiative
RDT  Rapid Diagnostic Test
SUFU Scale Up For Impact
USAID United States Agency for International Development
WHO  World Health Organization
Purpose
In 2014, PATH MACEPA conducted a stakeholder analysis in Kenya to assess the perceptions of key stakeholders in malaria policy and implementation decision-making around what is needed to accelerate progress toward Kenya’s national malaria reduction targets, opportunities and barriers to increasing the prominence of malaria on the national health agenda, and readiness to introduce and scale new tools and approaches to accelerate efforts against malaria. This stakeholder analysis seeks to capture and share critical information that can inform strategies, policies and plans to accelerate progress in reducing and eliminating the burden of malaria in Kenya and sub-Saharan Africa.

Background
Kenya has an estimated population of 43.2 million people, approximately 80% of whom are at risk for malaria. The coastal regions and areas surrounding Lake Victoria make up the highest risk areas. Approximately 21% of outpatient consultations and 3–5% of hospital admissions are due to malaria each year, with Plasmodium falciparum the most common source of infection. Kenya has two rainy seasons—the long rains occur from March to May and short rains from October to December.

Kenya’s government places a high priority on malaria control, and the current NMS for 2009–2017 outlines strategies focused on scaling up malaria control and laying the groundwork for realizing the vision of a “malaria-free Kenya”. Specifically, this strategy aims to reduce morbidity and mortality caused by malaria in the various epidemiological zones by two-thirds of the 2007-2008 level by 2017.

MACEPA works in Kenya in collaboration with the National Malaria Control Program (NMCP), Kenya Ministry of Health, and other partners from the Malaria Elimination Consortium, western Kenya (MEC-WK). MACEPA’s activities are focused in Western Province, in the high risk areas surrounding Lake Victoria.

Following national and county general elections in March 2013, Kenya began the process of devolution from seven provinces to 47 counties as the primary administrative unit; there is a three-year timeline for full implementation guided by a Transitional Authority. The NMCP, which is part of the Directorate of Preventive and Promotive Services, Division of Communicable Disease Prevention and Control, will continue to be responsible for policy formulation and technical guidance as well as dissemination of information. Functions that have been transferred to the counties include the management of health service interventions implementation, communicable and vector-borne disease control, and environmental health services. Health financing, health information systems and monitoring and evaluation are expected to be shared functions between the national and county levels.

---

4 PMI Kenya Malaria Operational Plan 2015
5 PMI Kenya Malaria Operational Plan 2015
6 Kenya National Malaria Strategy 2009-2017
7 Kenya National Malaria Strategy 2009-2017
Methodology

Objective
The primary objective for this analysis was to systematically gather and analyze data to assess the perceptions and priorities of key stakeholders in malaria policy and implementation decision-making in Kenya around malaria reduction, pre-elimination, and eventually elimination efforts. This analysis included an examination of stakeholder perceptions in the following two areas:

2. Necessary actions to build upon the successes and to address any gaps in Kenya’s malaria reduction efforts, specifically in the areas of policy, governance, financing, planning and operations, evidence base, and tool development.

The methodology used for this stakeholder analysis was adapted from Kammi Schmeer’s *Guidelines for Conducting a Stakeholder Analysis*, created by Partnerships for Health Reform, a document created to guide health sector policy actors through an objective and systematic process for collecting and analyzing data about key stakeholders influencing a specific policy. Schmeer’s guidelines and tools provided an adaptable framework for our stakeholder analysis process. Stakeholder analysis planning, data collection, and analysis were conducted by PATH MACEPA and the assessment team.

Stakeholder Identification
For the purposes of this assessment, stakeholders were defined as key external and in-country actors in organizations with a vested interest in malaria policy and/or malaria program implementation in Kenya. The PATH MACEPA Kenya office facilitated the identification of stakeholders and respondents were asked to participate on behalf of PATH MACEPA.

Upon identification of respondent categories, PATH MACEPA sent letters to priority organizations explaining the stakeholder analysis objectives and approach and requesting interviews with key organizational representatives, including individuals in leadership and technical roles supporting national malaria efforts.

Stakeholders were identified and selected from the following three categories:

- **Decision-makers**, including donors (country representatives of multilateral and bilateral donor agencies) who have the ability to directly or indirectly impact the design of the NMS.
- **Implementers**, including representatives from NGO implementing partners. Implementers play a crucial role in planning and executing the NMS.
- **Adopters**, including regional and lower level government, health management teams, and community representatives. Adopters play a critical role in the implementation and realization of the NMS at subnational levels.

---

A majority of stakeholders (11 out of 13) were adopters working in Western Kenya, specifically in Siaya County. This category of respondents included individuals from County, sub-County, and Facility Health Management Teams, as well as Community Health Volunteers (CHV). By focusing on these counties, the study highlights stakeholder perceptions at the regional level and draws out local, contextual dynamics that can influence stakeholder attitudes towards malaria reduction. New learnings about stakeholder perceptions and attitudes that emerge can be used to inform malaria policy and practice regionally and nationally.

One decision-maker and one implementer were interviewed. Additional decision-makers and implementers were approached to participate, though at the time of interviews were either unwilling or unable to participate.

For a full list of stakeholder organizations interviewed, see Appendix 2: Stakeholder Overview.

**Data Collection**

**Qualitative Data**

Semi-structured informant interviews were conducted in Kenya for one week in November 2014 in Nairobi, Kisumu County, and Siaya County. The interviews were conducted in English by two interviewers who alternated leading interviews and taking notes.

Semi-structured interview scripts with open-ended questions were developed in advance of the interview process and were tailored specifically to each stakeholder category. Interview scripts were vetted with the Kenya PATH MACEPA team. During the stakeholder interviews, probes and follow-up questions were used by the interviewing team as needed to capture a sufficient level of detail. For a full list of interview questions by stakeholder category, see Appendix 1, Stakeholder Interview Questions.

The BMGF has developed an analytical framework positing that six “building blocks” – policy, governance, financing, planning and operations, tool development, and evidence base – must align to create a critical pathway towards malaria elimination. The building block framework was used to organize and analyze the content from the stakeholder interviews. Using the building blocks, stakeholder perspectives were coded across the following six categories:

- **Policy**: a supportive policy environment to facilitate the introduction of new approaches and strategies for malaria parasite elimination as a part of the national strategy. Sufficient data, knowledge, and access to information for decision-makers to sufficiently support changes in policy, strategy, and guidance on malaria efforts.

- **Governance**: sense of national ownership and commitment to the country’s malaria initiatives. Defined architecture to ensure coordinated planning and implementation. The exercise of political, economic, and administrative authorities in the management of malaria efforts at all levels. Support or engagement in regional collaboration and cross-border initiatives focused on malaria.

- **Financing**: long-term commitment of domestic funds from national programs for malaria efforts. External donor willingness to support approved tools and interventions. Sufficient access to information needed by donors to make empowered decisions. General understanding of total cost required for effectiveness.
• **Planning and Operations**: adequate health system capacity, infrastructure, and human resources to implement NMS and operational plans. Specific plans for scale-up of new approaches, products, and strategies. Realistic timeline for country-wide implementation.

• **Evidence base**: sufficient evidence around new tools and approaches to support policy change and national program adoption.

• **Tool development**: necessary product development for new tools.

**Confidentiality Guarantee**

From the outset, total confidentiality of all stakeholder responses was guaranteed in order to encourage honest and open responses. Each stakeholder heard a standard, pre-approved introduction about the interview process and provided verbal consent before beginning the interview.

Although individual responses are highlighted in the report, any direct identifying information is excluded. Any identifying information collected was not shared beyond the PATH MACEPA interview and assessment team.

All information collected during stakeholder interviews, was stored securely in password protected files. Interview participants were given the option to decline audio recording. Only the assessment team had access to these recordings. Once content review and analysis was complete the recordings were de-identified and erased.

**Qualitative Results**

The stakeholder interviews provided rich detail into the opportunities and challenges in current malaria efforts in Kenya. Based on the group of stakeholders interviewed, the content received primarily pertains to operations at the County, sub-County, and community level, which provides useful insight into the dissemination of policies and practices from the national to local level. A majority of stakeholders spoke positively of recent gains in malaria reduction efforts in Kenya, though they had substantial recommendations for possibilities for improvement.

All stakeholder interviews were analyzed and coded against the analytical framework developed by the BMGF of critical building blocks for elimination—policy, governance, financing, planning and operations, evidence base, and tool development. Stakeholder perspectives on the major successes and challenges faced in Senegal’s malaria efforts are summarized in the following section aligned to the six building block categories.

**Policy**

The policy building block refers to a supportive policy environment and an existing framework to facilitate national decision-making, particularly data, knowledge, and access to information for decision-makers to sufficiently support changes in policy, strategy, and guidance on malaria efforts.
Kenya’s National Malaria Strategy (2009–2017) sets the goal of reducing morbidity and mortality caused by malaria in the various epidemiological zones by two-thirds of the 2007-2008 level by 2017, by accomplishing the following six objectives:

1. To have at least 80 percent of people living in malaria risk areas using appropriate malaria preventive interventions by 2013 through:
   - Universal LLIN coverage for populations at risk;
   - Indoor residual spraying in targeted areas for disease burden reduction; and
   - Prevention of malaria in pregnancy.

2. To have 80 percent of all self-managed fever cases receive prompt and effective treatment and 100 per cent of all fever cases who present to health facilities receive parasitological diagnosis and effective treatment by 2013 by:
   - Strengthening capacity for malaria diagnosis and treatment;
   - Increasing access to affordable malaria medicines through the private sector; and
   - Strengthening home management of malaria.

3. To ensure that all malaria epidemic prone districts have the capacity to detect and the preparedness to respond to malaria epidemics annually by 2010 through capacity strengthening for epidemic preparedness and response.

4. To strengthen surveillance, monitoring and evaluation systems so that key malaria indicators are routinely monitored and evaluated in all malarious districts by 2011 through capacity strengthening for malaria surveillance, routine monitoring and operational research.

5. To strengthen advocacy, communication and social mobilization capacities for malaria control to ensure that at least 80 per cent of people in malarious areas have knowledge on prevention and treatment of malaria by 2014 through the development of appropriate advocacy for uptake of specific malaria interventions.

6. To strengthen capacity in programme management in order to achieve malaria programmatic objectives at all levels of the health care system by 2014 through capacity building for human resource and infrastructure and instituting activity performance monitoring.

Stakeholder perspectives on the NMS reduction target
During the interviews, questions were asked to understand stakeholders’ opinions on their opinions of the feasibility of the reduction target outlined in the NMS. For those unfamiliar with the precise goals of the NMS, the targets were reviewed in order for them to provide feedback. In general, the overall level of support for the NMS reduction targets was high, though confidence in the ability to achieve all of the objectives was only moderate.

Improvements in control efforts have been observed by stakeholders following the strengthening of case management at the community level through Community Health Volunteers (CHVs) and Community Health Extension Workers (CHEWs), and stakeholders stated that continued capacity

building and expansion of these networks will allow Kenya to see further reductions and achieve the 2017 target.

One stakeholder noted that when goal setting you must always consider whether goals are aspirational or achievable, and felt that Kenya is on track to meet some of the objectives stated in the strategy, but that some are beyond the current capacity to achieve. In contrast, other stakeholders felt that the goals are not ambitious enough. These respondents said that the government could be striving to achieve a more drastic reduction on a faster timeline and hoped that the next NMS will contain loftier goals that strive towards elimination.

Despite varying levels of optimism for Kenya’s ability to achieve the goals, five stakeholders felt that for now, the reduction target is sufficient in its ambitions and that until control is better achieved in Kenya, discussions of pre-elimination should be on hold. These stakeholders suggested improvements for further success: behavior change to encourage appropriate use of nets and seeking treatment at first onset of symptoms, increased IRS especially around the lake endemic region, increased funding for IRS, improved environmental management, capacity building at all levels of the health system, increased levels of human resources, and monetary incentives for community-level volunteer health workers.

**Perspectives on moving towards pre-elimination**

In discussions on achieving Kenya’s reduction targets, stakeholders were also probed to give their opinions on the feasibility of pre-elimination, reorienting Kenya’s malaria control program towards elimination and reinforcing case management and surveillance to halt transmission, as a future goal for Kenya. Many stakeholders were positive about eventually considering pre-elimination, though hesitant to state any defined timeline. Concerns of clear strategic vision surfaced as a primary reason Kenya may struggle to be ready for pre-elimination in the near term.

The concept of pre-elimination was familiar to some stakeholders as implementing partners have been using this language and providing training in areas where they work, though for some the concept of a pre-elimination program was new. Stakeholders who were familiar with the concept of pre-elimination programs did not have a clear understanding on the change in activities required to transition interventions in Kenya from a control stage to a pre-elimination stage.

Gaps identified that will need to be addressed in order to move towards pre-elimination include: increased political commitment, increased financial commitment, increased human resources particularly at the community level, increased behavior change communication and community health education, increased appropriate use of LLINs, improved treatment-seeking behavior among those with symptoms, increased coverage of IRS, and additional resources for CHVs—including transportation, monetary incentives, and cell phone chargers.

One stakeholder identified the need for Kenya to reorient its malaria policy to target intensity of interventions in each county according to malaria burden, noting that there are 47 counties in Kenya, about 11 of which do not have malaria burden yet still receive malaria resources.
**Governance**
The governance building block encompasses national ownership and commitment to the country’s malaria initiatives. This includes a defined architecture to ensure coordinated planning and implementation; the exercise of political, economic, and administrative authorities in the management of malaria efforts at all levels; and support or engagement in regional collaboration and cross-border initiatives focused on malaria.

Many stakeholders felt that governance is one of the weakest factors in Kenya’s malaria control program. As mentioned in the background section, Kenya began a process of devolution in 2010 and has since had compounding difficulties in the direction and implementation of a successful malaria control program, especially in light of high turnover in leadership in recent years.

**Political Commitment**
The difficulty in successfully implementing devolution is a serious concern for stakeholders. Many felt that the process showed weakness in management, resulting in a lack of support, including for managing human resources, and confusion about where decision-making power lies.

A success of devolution has been improved monitoring and managing of activities at the community level, now that decisions are made at the local level. However, while counties have the authority to make decisions and guide action, there is a lack of adequate funding allocated to county leadership in order to be able to implement actions. The lack of domestic coordination has caused partners to withdraw, compounding the difficulty for counties. Choosing to divest is the only current way for donors to influence the government to change decisions they feel are incorrect. Increased political and financial commitment is required to ensure the current malaria control system does not collapse.

Commitment is important not only at the national level but also at the community level. There is opportunity for community leaders—for example religious leaders, village chiefs, or women’s groups—to drive the malaria agenda forward, and encourage the county government to increase support and improve efficiency of control activities.

**Partnership and Collaboration**
Increased collaboration among partners, especially at the county level, was stated as an opportunity to enhance impact, especially as decisions increasingly fall to the local level rather than remaining at the national level. The need for partners and value was recognized by many stakeholders, with one noting that without partners many counties would not be able to procure the commodities needed for interventions. Partners should work to harmonize agendas and work in support of each other’s goals.

**Financing**
The financing building block refers to sustainable long-term commitment of domestic funds from national programs for malaria efforts as well as external donor willingness to support approved tools and interventions.
Donor Financing
A decrease in financial commitment—both by donors and by the national government—worried several stakeholders. Donors, such as PMI, DFID, and the Global Fund, have been routinely funding vector control programs, which have contributed to success. Recently, some of these donors have decreased regular financial support to the government, mainly because of Kenya’s weak governance and lack of domestic commitment towards financing vector control commodities. This poses a serious challenge in moving forward with malaria reduction and elimination goals. Financing commodities is a continuing and increasing need as the national government is unable to cover all needs. About 50% of USAID funding is currently allocated for commodities (primarily LLINs), and if IRS is to be continued in the future, this will likely require significant donor financing.

Stakeholders recommended that counties receive direct funding and support from partners in order to avoid complicated bureaucratic processes at the national level. However, the operational difficulty of this was noted in that it could require donors and partners to have separate agreements directly with each county, which is difficult to manage, rather than one national agreement.

Domestic Financing
Stakeholders felt that the government is not contributing sufficient finances and that the counties, left responsible for providing their own finances because of devolution, lack the capacity to cover costs. One stakeholder noted that most of government funding goes directly towards salaries, and there is little evidence beyond this of activities supported. Further, a small investment by the government to pay incentives for the CHVs could improve efficiency and accuracy of case management and reporting, but to-date the government has not shown interest.

In Siaya County, the lack of funding has resulted in electricity being shut off in health facilities, sometimes for hours. Health facilities were previously funded in-part by fees collected from clients. Changes in policy were made so that health centers provide treatment free of charge, but funds from the national government have not increased at a sufficient level to make up for this deficit in funds received, causing delays in paying bills, procuring commodities, etc.

Planning and Operations
Planning and operations refers to the support structure of human resources, health system capacity, logistics, and infrastructure that is needed to implement current and future iterations of Kenya’s NMS.

Stakeholders were especially concerned about the gaps in implementation of prevention and control interventions. Improvements are critically required in vector control, human resources and capacity, and logistics and supply of commodities. Stakeholders also suggested ways to increase community awareness and engagement, surveillance, and rapid reporting.
Vector Control

Indoor Residual Spraying
The majority of stakeholders expressed major concerns over the inability of Kenya’s IRS program to carry out IRS the past few years, and see its implementation as critical to expand control efforts, especially in highly endemic areas. IRS has not been implemented in Kenya since 2012, and even then only some counties were sprayed, while others that are more endemic were not covered due to multiple factors. At the county level, many stakeholders stated that IRS is critical, and according to two stakeholders it is the most critical tool for the country to get closer to the goal of reducing malaria burden by two-thirds by 2017.

LLINs
Many stakeholders believe that there is no problem with net distribution and coverage; the main challenge is appropriate usage and coverage at hours of dusk and dawn.

According to one stakeholder, one net is provided for every two people in a household and new nets are delivered approximately every three years. Effectiveness of nets may increase if a net is given to every person (noting that, for example, your children may grow past the age of sharing a bed) and if there is more frequent re-distribution to account for nets being torn or otherwise compromised.

Challenges in proper usage include increased heat and a suffocating feeling when sleeping under nets, fear that insecticides sprayed on nets are unsafe, and net use for other activities such as fishing or protecting gardens from animals. Siaya County has involved key leaders in society such as the First Lady of the County Governor and communication tools such as radio talks to demystify myths of net use; further behavior change communication campaigns could increase effectiveness, ensuring that people understand the need for proper net use.

Case Management

Diagnosis
In general, case management with effective diagnosis and treatment is well supported by donors and partners in Kenya. However, at the county level, there are varying opinions concerning effectiveness of diagnostic methods.

At the health facility level, RDTs are the most common form of diagnosis. Stakeholders stated that RDTs are easy for CHVs to use and more feasible for health centers that do not have microscopy capabilities and are far from the nearest lab. Sustained stocking of RDTs was cited by four stakeholders as a success, stating that reliable stocking of RDTs is not a current issue for their facility.

However, accuracy of RDTs was questioned by stakeholders. Challenges mentioned with RDT use include: RDTs occasionally miss cases; sometimes the CHV or CHEW is not properly administering the RDT (incorrect amount of blood, buffer, etc.); and some CHVs or CHEWs still give malaria treatment without confirming with diagnosis.

There is a need for more microscopes and lab facilities, with one stakeholder saying that more than 30% of facilities do not have microscopes; and even in facilities that may have a microscope there is no
guarantee that there will be the reagents needed. Microscopy is sometimes inhibited by lack of electricity at health centers.

**Treatment**

Stakeholders state that AL continues to be effective as a first-line treatment. Two stakeholders were aware of DHA-p as the second-line treatment, though they do not report seeing it stocked in health facilities. DHA-p is being used by CDC and KEMRI selectively for research and it is also available in private pharmacies.

Compliance was stated to be the biggest treatment challenge. Increased education around the importance of taking a full course of drugs could help improve adherence. More education is also needed around confirming malaria diagnosis by a CHV or health facility at the onset of a fever, rather than self-diagnosing and buying AL from pharmacies without confirming diagnosis and receiving proper instruction on the need for completing the full course.

Accurate and timely stocking of malaria drugs has suffered since this responsibility was transferred to county governments, and stock outs vary by year and health facility.

One stakeholder mentioned that they try to follow-up with each case in person or by phone to ensure proper use of treatment, but that it is difficult with their high caseloads.

**Human Resources**

Stakeholders described human resource gaps as a major challenge and opportunity for improvement. Many stakeholders acknowledged that the development of the CHV and CHEW network has accelerated successes, but there is a need for more staff, training, and accountability to improve the successes of these networks. Further, additional specialized staff is needed across all levels of the health system.

**Increased staffing**

Stakeholders emphasized that the health system is stretched beyond capacity. One stakeholder mentioned that in Siaya County it is common for CHVs to be responsible for more than 100 households, which they did not feel was feasible. Another stakeholder felt that the numbers of CHVs is acceptable, but that there are certain times of the year when they are unable to tend to their tasks at home because they are too busy fulfilling duties as a CHV. Health centers often only have one clinical officer who has to tend to several health issues and one lab technician, which is not sufficient for current malaria levels. Facilities would benefit from a second clinical officer who is able to focus solely on outpatient needs. The current standard is to have three nurses at the health center, but an effective level of staffing would have closer to seven nurses to keep up with the demand of patients seen, especially if there is a severe medical issue, such as the performance of a delivery. In some cases staff share duties to cover gaps; for example, the current Malaria Coordinator was a pharmacist who stepped in to cover needs as the Coordinator after the previous coordinator left suddenly. One stakeholder estimates that at most the County Health Centers have 25% of needed staffing.

“My eyes become strained from testing too much in one day. Aside from malaria, I have a long list of other things I need to test for, and I am the only one who can do this. We need at least 2 or 3 lab technicians in total” — Adopter
Increased capacity building
The need for better and more frequent training across the health system, but especially for CHVs, was a recurring theme among stakeholders. Several stakeholders noted that CHVs make mistakes in diagnosis and treatment that could be avoided if they received better training, and more frequent refresher courses. Training should cover appropriate diagnosis methods, correct treatment and importance of course duration, accurate completion of registers, use of mobile phones for reporting, and key strategies at home to ensure proper bednet use and water management. The entire health facilities could use additional training as well, especially on accurate procedures for severe malaria. Beyond training, increased supervision and access to supervisors and superiors across the system could improve effectiveness and motivation through increased support.

Increased Incentives
One stakeholder noted that “the entire health system is relying on unpaid community health workers, who do the most amount of work”. This concern was echoed by many, who felt that compensation for CHVs is essential to ensure continued commitment to the work, energy for accuracy, and appropriate compensation for the intense amount of time required to complete activities. Beyond compensation, specific resources could be provided to CHVs to improve conditions and compensate for work completed, including boots to protect from snakes when visiting homes at night, umbrellas during the rainy season, and bicycles or other modes of transportation. It is of interest to note that since these interviews were conducted, Siaya County has established and implemented a system where CHVs are paid monthly for the work that they perform, making Siaya County the first County in Kenya to have such policy.

Community Engagement
Ensuring community members are educated about proper use of bednets, when to seek treatment, how to minimize standing water in and around their homes, and other prevention strategies will accelerate success in reduction efforts. The CHV network is well positioned to provide this education, if they are equipped to do so. Increased education and sensitization around the capabilities and availability of CHVs will also encourage improved treatment-seeking behavior at the first signs of symptoms. These efforts should also aim to increase the understanding that the severity of malaria is high and requires accurate diagnosis and treatment, and not just a pain-killer and fever-reducer. One stakeholder noted that if people knew how much money is being spent by County governments on controlling and preventing malaria, they may approach prevention and timely diagnosis and treatment more seriously.

Surveillance System
Stakeholders recommended that surveillance systems be strengthened. Many adopters were satisfied with the current tools and practices used for surveillance, and cited routine reporting of malaria case data as a success. However, there is opportunity to enhance accuracy of the system through increased human resource capacity and expansion of information collected, as well as using data for timely decision-making. Malaria case data is reported into the District Health Information System (DHIS2), but

“At the community level, we need to create awareness that the CHVs can do the testing and give the right drugs. Some community members still don’t use this resource or know that CHVs can provide treatment.” — Adopter
information on commodity consumption is currently lacking. Further, there is a lack of clarity for adopters on how the data that is reported is being used to inform action at the regional and national level. CHVs turn registers into CHEWs monthly; one adopter felt that monthly reporting is frequent enough, while another felt that reporting should be increased to every two weeks so that CHEWs have increased supervision over CHV work and can identify challenges in accurate registry completion more quickly.

**Supply Chain and Logistics**

Government devolution of health system responsibilities has not solved the gaps that existed and there is no effective and well-functioning system for timely distribution of malaria commodities. While stock-outs are not a constant problem, the adequate supply of malaria drugs and diagnostics has been inconsistent over the past year and varies by county and health facility. One stakeholder noted that they were slated to receive a commodities shipment in September 2014, but that this did not arrive until nearly the end of November. Compounding the problem, the Kenya Medical Supplies Agency (KEMSA) warehouse burnt down a year ago, leading to temporary commodities shortages.

In order for supplies to be delivered to counties, they must be requested along with other essential medicines that the health centers pay for. According to one stakeholder, commodities and supplies that are provided free of charge (such as malaria commodities) to health facilities will only be delivered along with supplies that are provided at-cost. Therefore if a health facility is lacking funds to procure other medicines, the delivery of malaria commodities will be delayed.

**Evidence Base**

Due to the stakeholders interviewed—who primarily focus on implementation rather than research—little information was received regarding evidence around new tools and approaches to support policy change and national program adoption. A few stakeholders did discuss the importance of accurate evidence sharing with decision-makers around the side effects and efficacy of various insecticides for IRS, in order to minimize stigma and fear around implementing IRS. Further, many stakeholders cited fears that compliance issues could lead to drug resistance in the future, and recommended drug resistance monitoring be implemented in Siaya County to ensure this does not happen. Two stakeholders would like to see increased evidence on the use of DHA-p to determine if it should become a first-line treatment in Kenya.

**Tool Development**

Necessary product development for new tools was mentioned briefly by stakeholders. One stakeholder mentioned that current RDTs are not sensitive enough, and stakeholders see use for an RDT with increased sensitivity and specificity for improved accuracy in diagnosis. To address the compliance problem from multiple-course drugs, some stakeholders thought that it would be helpful to have an ACT that required fewer courses to complete.
Conclusions and next steps
This Kenya stakeholder analysis report and its supporting qualitative data will serve as a baseline for PATH MACEPA and partners’ ongoing analysis of the enabling environment for national malaria policy and implementation efforts. The findings from the stakeholder analysis report will be used to identify challenges and opportunities – technical, financial, and operational – to accelerate Kenya’s progress toward national reduction targets.

<table>
<thead>
<tr>
<th>Building Blocks</th>
<th>Stakeholder perspectives: Strengths</th>
<th>Stakeholder perspectives: Areas for Improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Policy:</strong> a supportive policy environment and an existing framework to facilitate national decision-making. Sufficient data, knowledge, and access to information for decision-makers to sufficiently support changes in policy, strategy, and guidance on malaria efforts.</td>
<td>• Reduction targets are more feasible following the creation of Community Health Volunteers (CHVs) and Community Health Extension Workers (CHEWs).</td>
<td>• Current goal is not ambitious enough; need NMS goals that strive to achieve a more drastic reduction on a faster timeline. • Re-orientation of policy to focus malaria interventions targeting the highest-burden areas.</td>
</tr>
<tr>
<td><strong>Governance:</strong> sense of national ownership and commitment to the country’s malaria initiatives. Defined architecture to ensure coordinated planning and implementation. The exercise of political, economic, and administrative authorities in the management of malaria efforts at all levels. Support or engagement in regional collaboration and cross-border initiatives focused on malaria.</td>
<td>• Increased decision-making power at the local level following devolution, improving local monitoring and managing of activities.</td>
<td>• Improved clarity between national and local leaders in roles and responsibilities following devolution. • Increased national support for county leaders to carry out increased responsibilities following devolution. • Increased engagement of community leaders to influence county governments to increase support and improve efficiency of control activities. • Increased partnership and collaboration among partners at the county level.</td>
</tr>
<tr>
<td><strong>Financing:</strong> long-term commitment of domestic funds from national programs for malaria efforts. External donor willingness to support approved tools and interventions. General understanding of total cost required for effectiveness.</td>
<td>• Case management with effective diagnosis and treatment is well supported by donors and partners.</td>
<td>• Increased national funding allocated to county leadership in order to implement intervention activities. • Sustained donor funding in light of governance challenges. • Increased domestic commitment towards financing vector control commodities.</td>
</tr>
<tr>
<td><strong>Planning and Operations:</strong> adequate manufacturing, infrastructure, and human resources to implement malaria control and elimination efforts. Specific plans for scale-up of new approaches, products, and strategies. Realistic timeline for country-wide implementation.</td>
<td>• Improved case management through CHEW and CHV networks. • High bednet coverage. • Utilization of community leaders and communication tools such as radio talks to dispel myths contributing to improper bednet use. • RDTs are easy for CHVs to use and are increasing diagnostic access. • Routine reporting of malaria case data.</td>
<td>• Funding gap for IRS. • Improve proper use of bednets through additional behavior change communication campaigns. • Improve proper testing of malaria with the use of RDTs. • Increased access to microscopy. • Improve patient compliance of ACT regimen. • Strengthen human resources through increased staffing, training, and supervision.</td>
</tr>
</tbody>
</table>
| Evidence Base: sufficient data to support current strategy and approaches and/or to guide future policy changes. | • Reduce delays in timely distribution of malaria commodities to some health facilities.  
• Additional data on commodities quantities added to surveillance data reporting.  
• Accurate evidence shared to decision-makers around safe insecticides for IRS, in order to minimize stigma and fear around IRS implementation.  
• Strengthening of drug resistance monitoring.  
• More data on DHA-p to determine if it should be added to national treatment guidelines as a first-line treatment in Kenya. |
| --- | --- |
| Tool Development: necessary product development for new tools. | • Development and introduction of RDT with increased sensitivity and specificity for improved diagnostic accuracy.  
• Development and introduction of ACT requiring fewer courses to complete. |
Appendices

Appendix 1: Stakeholder Interview Questions

Decision-makers (Donors)

Trying to assess level of commitment to national malaria reduction targets, prioritization of malaria among other health and development efforts, understanding of technical and operational components of accelerating elimination, willingness to mobilize/commit financial and human resources toward elimination

- How do you feel goals around malaria reduction rank in comparison to other health areas?
  - Example: HIV, TB

| National Malaria Strategy 2009–2017 Goal | By 2017, to have reduced morbidity and mortality caused by malaria in the various epidemiological zones by two thirds of the 2007/08 level |

- What are the three highest priority challenges or opportunities your organization faces in the effort to greatly reduce malaria?

- What are you or your organization currently doing to address this challenge or take advantage of this opportunity?
  - How well are these efforts working?
  - How will you know you have been successful?

- What future actions (by the MOH, MCU, implementing partners, private sector) do you feel are necessary for progress towards Kenya malaria reduction goals?

Implementers (Implementing and Research Partners)

Trying to assess level of understanding of technical and operational components of accelerating reduction of malaria, familiarity with newer drugs and approaches (i.e. DHA-P, ivermectin, sldPQ, and approaches focused on clearing parasites out of people/attacking the asymptomatic reservoir), perceptions around technical and operational feasibility of national elimination goals given the tools, approaches, human resource capacity we have today, challenges/opportunities.

- How would you describe recent past efforts (past 10 years) toward greatly reducing malaria to date?
  - What were factors for success?
  - Where are the specific gaps?

- How achievable do you think Kenyan national malaria reduction targets are?

| National Malaria Strategy 2009–2017 Goal | By 2017, to have reduced morbidity and mortality caused by malaria in the various epidemiological zones by two thirds of the 2007/08 level |

- State the Kenyan national target/goal
  - What is needed to achieve them?
What are the obstacles?

Summarizing what is needed to achieve national malaria reduction:

- What do you feel are critical inputs?
  - Probe: What kinds of tools are needed? Drugs, Dx, vector control, others?
- What kinds of approaches are needed?
  - Probe: Population wide approaches looking for infections in people—targeting the asymptomatic reservoirs, targeted vector control, improved case management
  - Probe: Drugs, Dx, vector control, new tools
  - Probe: Systems such as logistics, information, procurement, financing
  - Probe: Needed capacity including expertise, skillsets, reporting/supervision

Adopters (County/sub-County/Health Facility Teams)

Trying to assess level of understanding of technical and operational components of accelerating elimination, familiarity with newer drugs and approaches (i.e. DHA-P, ivermectin, sldPQ, and approaches focused on clearing parasites out of people/attacking the asymptomatic reservoir), perceptions around technical and operational feasibility of national elimination goals given the tools, approaches, human resource capacity we have today, challenges/opportunities

- How far has your county/district come in regard to reducing malaria?
  - To what factors do you attribute success?
  - Where are the gaps?

- What is the current prevalence rate in the county, subcounty?

- Are national elimination targets achievable?
  - Probe: What is needed to achieve them?
  - Probe: What are the obstacles?
  - Probe: Reflect on changes that need to take place to meet elimination targets across process, tools, systems, people

- Where do you need more support from the MCU? Other implementing partners?
  - Probe: Population-wide approaches looking for infections in people—targeting the asymptomatic reservoirs, targeted vector control, improved case management
  - Probe: Drugs, Dx, vector control, new tools
  - Probe: Systems such as logistics, information, procurement, financing
  - Probe: Needed capacity including expertise, skillsets, reporting/supervision
Appendix 2: Stakeholder Overview

<table>
<thead>
<tr>
<th>ID #</th>
<th>SH Group</th>
<th>Sub-Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Decision-maker</td>
<td>Donor</td>
</tr>
<tr>
<td>2</td>
<td>Implementer</td>
<td>Implementing Partner</td>
</tr>
<tr>
<td>3</td>
<td>Adopter</td>
<td>Health Center Management Teams</td>
</tr>
<tr>
<td>4</td>
<td>Adopter</td>
<td>Health Center Management Teams</td>
</tr>
<tr>
<td>5</td>
<td>Adopter</td>
<td>Health Center Management Teams</td>
</tr>
<tr>
<td>6</td>
<td>Adopter</td>
<td>Community Management Teams</td>
</tr>
<tr>
<td>7</td>
<td>Adopter</td>
<td>Health Center Management Teams</td>
</tr>
<tr>
<td>8</td>
<td>Adopter</td>
<td>Health Center Management Teams</td>
</tr>
<tr>
<td>9</td>
<td>Adopter</td>
<td>Health Center Management Teams</td>
</tr>
<tr>
<td>10</td>
<td>Adopter</td>
<td>Health Center Management Teams</td>
</tr>
<tr>
<td>11</td>
<td>Adopter</td>
<td>Health Center Management Teams</td>
</tr>
<tr>
<td>12</td>
<td>Adopter</td>
<td>County Management Teams</td>
</tr>
<tr>
<td>13</td>
<td>Adopter</td>
<td>Sub-County Management Teams</td>
</tr>
</tbody>
</table>