National Malaria Control Programme Monitoring and Evaluation Capacity

End Line Assessment Report

August 2017

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MEASURE Evaluation PIMA

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Cover photo: © 2012 Georgina Goodwin/Vestegaard Frandsen, courtesy of Photoshare

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ABBREVIATIONS

CHD	county health department
DDU	data demand and use
DFID	UK Department for International Development
DQA	data quality audit
HIS	health information system
KMS	Kenya Malaria Strategy
LLIN	long-lasting insecticide-treated net
M&E	monitoring and evaluation
MECAT	Monitoring and Evaluation Capacity Assessment Toolkit
MEval-PIMA	MEASURE Evaluation PIMA
MIAS	Malaria Information Acquisition System
MOH	Ministry of Health
MSC	Most Significant Change
MTEF	medium-term expenditure framework
NMCP	National Malaria Control Programme
TWG	technical working group
USAID	United States Agency for International Development
WHO	World Health Organization

1. INTRODUCTION

The MEASURE Evaluation PIMA (MEval-PIMA) project has been implemented in Kenya over the last five years, and key achievements have been made across the various results areas. These achievements have been documented through periodic project reporting mechanisms, including quarterly and annual reports and a midterm review. Achievements have also been shared and disseminated using a variety of methods, such as technical documents, quarterly newsletters, thematic updates, fact sheets and the MEval-PIMA Community of Practice.

As part of the project closeout, MEval-PIMA conducted an end-of-project assessment to document achievements and impact and provide lessons learned toward strengthening monitoring and evaluation (M&E) capacity of the Ministry of Health (MOH) at the national and subnational levels, to provide data demand and use (DDU) information for decision making, and to communicate and share the project legacy and closure with stakeholders and beneficiaries. As part of this assessment, the systematic documentation of the project legacy had two areas of focus: (1) capturing the experiences of the beneficiaries of key project support toward M&E capacity building, and (2) sharing end of project communications, culminating in a project closeout event in Nairobi.

2. OBJECTIVES

The main purpose of the end line assessment is to evaluate the changes in M&E capacity against the baseline and measure progress toward achievement of the Intermediate Result "Improved capacity of the MOH to identify and respond to M&E information needs." Specifically, the end line aimed to:

- Determine the change in M&E capacity in the programs by using the quantitative Monitoring and Evaluation Capacity Assessment Toolkit (MECAT)[1] group assessment.
- Document the key drivers to the changes in M&E capacity using participatory approaches.
- Document MEval-PIMA contributions to the changes in M&E capacity.
- Document lessons learned in terms of strengthening M&E capacity at individual and program levels.

3. BACKGROUND

3.1 About MEval-PIMA

The MEASURE Evaluation Phase III Kenya Associate Award, the MEval-PIMA project, was funded through the United States Agency for International Development (USAID)/Kenya to build sustainable M&E capacity among Kenyan health officials at the national and subnational levels.

A sustainable and strengthened M&E system was expected to yield high-quality data for use in evidence-based decision making, improving the effectiveness of Kenya's health system and the lives of the Kenyan people. To achieve this, MEval-PIMA focused on priority M&E programs at the national and county

[1] https://www.measureevaluation.org/pima/m-e-capacity/me-capacity

levels, and selected sub-systems that were expected to contribute high-quality data to the national health system. At the national level, MEval-PIMA worked to strengthen the M&E systems of five target programs:

- National Malaria Control Programme (NMCP) (formerly the Malaria Control Unit)
- Reproductive and Maternal Health Services Unit
- Community Health Services Unit
- Disease Surveillance and Response Unit (formerly the Division of Disease Surveillance and Response)
- Civil Registration Services (formerly the Civil Registration Department)

The targeted systems included:

- Health referral system and services
- Civil registration and vital statistics system
- Community health information system (HIS)
- Child protection and orphans and vulnerable children information systems

This assessment report focuses on the NMCP.

3.2 National Malaria Control Programme

The NMCP is one of several national public health programs under the Division of Communicable Diseases Prevention and Control in the Kenya MOH. During the project period, the NMCP implemented the Kenya Malaria Strategy (KMS) 2009–2018 (Revised 2014) and its accompanying M&E plan 2009–2018. The strategy is a concerted effort to achieve a malaria-free Kenya, and its mission is to direct and coordinate efforts against malaria though effective partnerships. The goal of the strategy is to reduce morbidity and mortality caused by malaria to two-thirds of the 2007–2008 level by 2017. The importance of M&E is recognized as a strategic objective in the KMS 2009–2018, and the strategy also emphasizes the importance of implementing malaria surveillance as a core intervention for malaria control. The NMCP also had a funded national research agenda.

At baseline, the main areas identified for improvement in the NMCP M&E system were human capacity for M&E and DDU capacity. Considering these gaps, the follow areas were identified for addressing these gaps:

- **Restructuring planning, coordination, leadership, and management.** The NMCP needed to revisit governance structures and partnerships with the devolution of autonomy to the counties and to institutionalize processes for organizational development.
- **Increasing confidence in routine HIS and improvements in routine monitoring.** The NMCP needed to continue to advocate for one national HIS and to make improvements in the gaps found in coverage data for intermittent preventive treatment in pregnancy, laboratory data, mortality data, and commodity tracking.
- **Incorporating DDU.** The NMCP did not have a DDU plan or data analysis and presentation guidelines. To establish a more structured approach to evidence-based decision making within the program, the NMCP needed to revise M&E plans to include information about data use and build capacity for DDU. The NMCP also needed to revisit the use of the Malaria Information Acquisition

System (MIAS) and update the inventories of institutions carrying out malaria research and evaluation.

- **Sustaining capacity building in the context of devolution.** The NMCP needed to advocate for and mobilize resources by linking its annual costed work plan with the medium-term expenditure framework (MTEF) and other channels. The NMCP should share its resources with the subnational levels and incorporate them in the larger planning processes.

Continued strengthening of M&E capacity of the NMCP continues to be essential to enable it to perform its M&E functions as part of wider efforts to improve MOH M&E systems in Kenya.

3.3 Support Provided to the NMCP

At baseline, the NMCP M&E system was strong in many capacity areas. The NMCP had a clear vision of its strategy to achieve a malaria-free Kenya by 2017 and clear governance structures to achieve this vision. The NMCP had an M&E Unit with adequate staffing, although it needed some additional staff with specific M&E skills. The NMCP had a national M&E plan and costed annual M&E work plan, but it did not have a specific work plan for building human resource capacity in M&E. A national M&E technical working group (TWG) met regularly to provide coordination and oversight for M&E. The NMCP had a strong commitment to M&E in senior management and a communication strategy to drive program advocacy, communication, and social mobilization. The surveillance system was functioning but needed improvements. The MIAS had been set up as a program monitoring and management tool but was not being used as intended. The NMCP also had a supportive supervision manual and checklists.

Given the areas for improvement identified during the baseline, as described in Section 3.2, MEval-PIMA's interventions focused on the following four technical areas:

- **Building capacity for malaria M&E at the national and subnational levels.** Examples of activities include adding a capacity building action plan to the M&E plan; training MOH staff on malaria surveillance, malaria M&E, impact evaluation, and health systems strengthening; and identifying and providing an orientation for county malaria surveillance champions.
- **Strengthening malaria surveillance systems at the national and subnational levels.** Examples of activities include developing a malaria surveillance curriculum for the MOH; developing tools for quality control; supporting data quality audits (DQAs) and data review meetings; and designing, reviewing, and publishing the national and county malaria surveillance bulletins and county profiles.
- **Providing overall technical assistance in the implementation of the revised malaria M&E plan 2009–2018 (Revised 2014), within the framework of the KMS 2009–2018 (Revised 2014).** Examples of activities include supporting the revision of the KMS and malaria M&E plan, developing a malaria DDU plan, providing support for the Kenya National Malaria Forum and for the malaria research agenda, supporting the gender and malaria assessment in Kenya, and providing support to the M&E and operational research TWGs.
- **Providing technical assistance for evaluations.** Example activities include updating epidemiological risk maps and the 2013 intervention coverage report for Kenya, developing malaria county profiles, producing a concept note and protocol and providing technical assistance for the

long-lasting insecticide-treated net (LLIN) evaluation, supporting the operational research TWG, and conducted the 2015 Kenya malaria impact evaluation.

4. METHOD

An end line assessment was conducted in a workshop setting using three participatory methods and an individual capacity assessment. Respondents for this exercise were program managers and program officers, including M&E officers and data managers from the NMCP.

The first participatory method used was the MECAT group assessment, which was also used in the baseline M&E capacity assessments. This tool guided participants through an assessment of NMCP M&E capacity in 12 capacity areas. The Most Significant Change (MSC) approach[2] was used to identify and prioritize the most significant changes within five domains (see Section 4.1) since the baseline assessments were conducted. After a most significant change was identified, participants also identified the reasons it was considered a change, the main drivers of the change, MEval-PIMA's contribution to the change (if any), and threats to the sustainability of the change. Outcome mapping methodology was used to map desired outcomes as a condition to sustain the gains made in strengthening M&E capacity. Using the threats to sustainability identified with the most significant changes, facilitators guided participants through individual, group, and plenary sessions to identify expected changes in behavior, suggested partnerships to develop, and example activities to be undertaken to sustain the progress in M&E strengthening. In addition, the individual competency-based assessment, also used during baseline, was administered to individual participants for them to self-assess themselves and their M&E competencies.

4.1 Five MSC Domains

The evaluation used five broad domains in which MEval-PIMA intended to make an impact on based on the project's mandate and findings from the baseline assessment. During the end line assessment, participants were asked to identify the changes they believed were most significant within each of the following domains:

- Domain 1: Strengthening structures and mechanisms for M&E coordination
- Domain 2: Ensuring availability of quality data
- Domain 3: Promoting data use practices
- Domain 4: Building M&E leadership competencies
- Domain 5: Building M&E capacity of MOH staff

4.2 Data Analysis

Scores obtained from the MECAT group assessment at end line analyzed to compute an organizational capacity index score, and changes between baseline and end line were used to document achievements toward

[2] MSC is a participatory monitoring approach that enables the identification of desired outcomes without using defined indicators. The MSC approach involves analyzing actual events to draw meaning out of them as a means of evaluating the impact of a project and to improve future planning and implementation. We used MSC to understand what program officers viewed as the most significant changes in the five domains listed in Section 4.1. Participants were guided through facilitated individual, group, and plenary sessions to identify and prioritize the most significant changes within the five domains since the baseline assessments were conducted.

strengthening the M&E capacity of the NMCP. The organizational capacity index was calculated by first summing the possible scores for the 12 M&E capacities for the status and quality dimensions. The financial and technical autonomy dimensions were excluded because the effect of these measures was not unidirectional, and the presence or absence of these dimensions could affect the performance of NMCP either positively or negatively. Technical and financial autonomy require long-term investment and depend on the status and quality dimensions. The organizational capacity index was then computed by dividing the actual score of the 12 M&E functions under the two dimensions of status and quality by the total maximum possible score. Individual assessment data were analyzed to understand changes in human capacity for M&E from baseline to end line. The MSC data were analyzed to understand what the program found to be the most significant changes resulting from the changes in the M&E system since baseline. The outcome mapping data were used to understand the threats to the changes made to the M&E system and to propose recommendations to mitigate these threats.

5. RESULTS

5.1 Findings from the MECAT Group Assessment

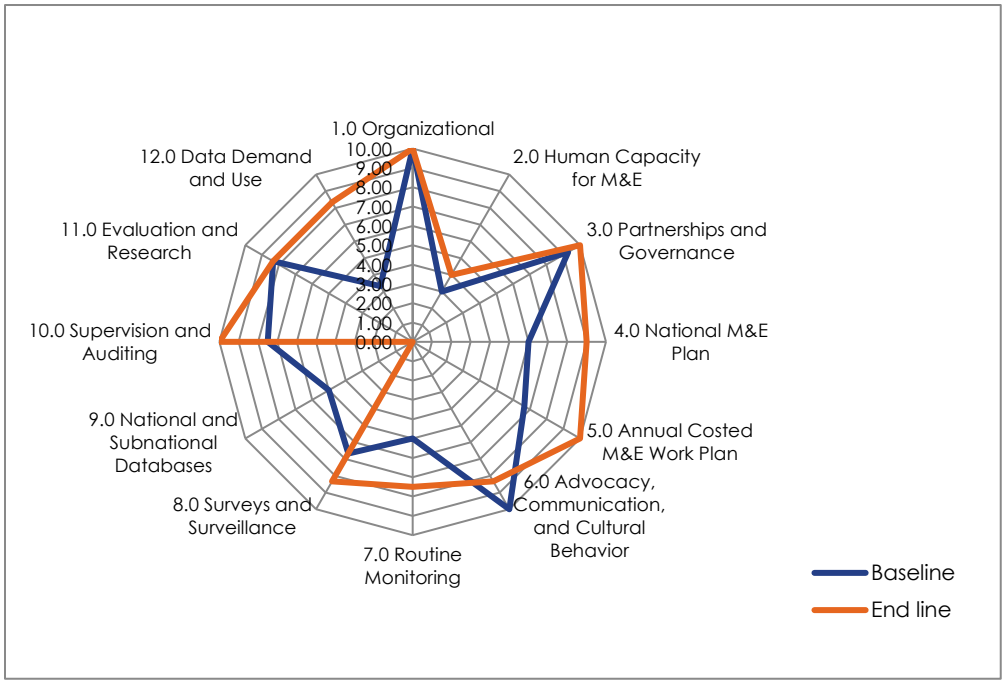
5.1.1 Overall Performance

The NMCP's organizational capacity index increased, from 65 percent at baseline to 81 percent at end line, indicating overall improvement in status and quality across the 12 capacity areas of its M&E program. Figures 1a–1d show specific changes in the capacity areas in the 2017 end line evaluation (red), compared to the 2013 baseline (blue), and by the various dimensions of interest—status, quality, and two measures of sustainability (technical and financial autonomy).

5.1.1.1 Status

Figure 1a shows the status of the NMCP M&E system. It is apparent that many of the tools, systems, structures, and processes were already established at the NMCP at baseline and were improved or maintained, to a relatively high standard. The status of the national M&E plan, annual costed work plan, routine monitoring, and DDU capacity areas increased markedly from baseline. The surveys and surveillance and supervision and auditing capacity areas also showed some increases. Increases in national M&E plan capacity can be mainly explained by the development of clear guidelines for reporting, approval of a multisectoral M&E plan, and approval of the NMCP M&E plan. The most notable change for the status of the annual costed M&E work plan was linking the annual work plan to the MTEF. For the routine monitoring capacity area, capacity increased mostly due to the approval of national guidelines that document the procedures for collecting, collating, and reporting data in the HIS. The NMCP's capacity for DDU increased dramatically, mainly due to the addition of a data use plan in the national M&E plan and the creation of draft guidance for data analysis and presentation. The NMCP noted improvements in reporting rates in the integrated disease surveillance and response system from facilities and adopted DQA procedures from the Division of Health Informatics Monitoring and Evaluation.

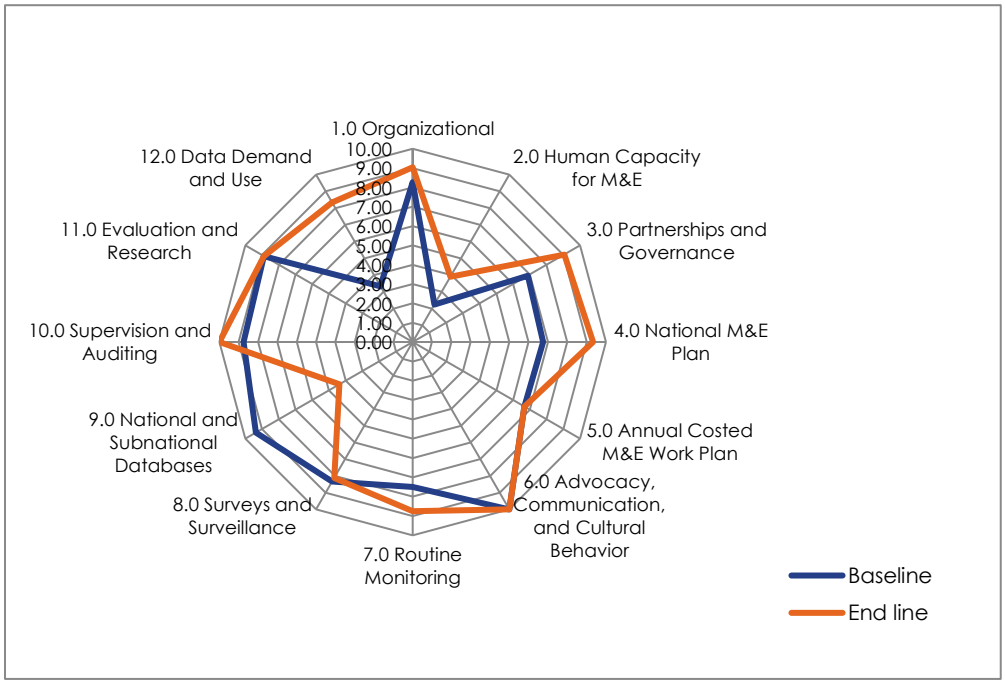
Figure 1a. Status of capacity areas at NMCP



5.1.1.2 Quality

Figure 1b shows that the quality of M&E structures, tools, processes, and systems most notably improved in the capacity areas of partnerships and governance, national M&E plan, and DDU. The largest changes in quality within the partnership and governance capacity area can be explained by a more recent review of the M&E strategic plan, improved awareness and adherence by staff to the standard operating procedures defining roles and responsibilities for malaria M&E, and a more completed and updated version of the M&E stakeholder inventory. For the national M&E plan capacity area, quality changed most in the element of guidelines specifying when information and reports need to be received. The NMCP reported that the M&E Unit was submitting its reports according to the guidelines. The results of the 2013 M&E system assessment were included in the latest version of the M&E plan. In the DDU capacity area, quality improved through the addition of the DDU plan in the national M&E plan. This plan conforms to best practices and is based on data needs determined by a DDU assessment. The organizational; advocacy, communication, and cultural behavior; surveys and surveillance; supervision and auditing; and evaluation and research capacity areas maintained higher levels of quality, and the quality of national and subnational databases decreased.

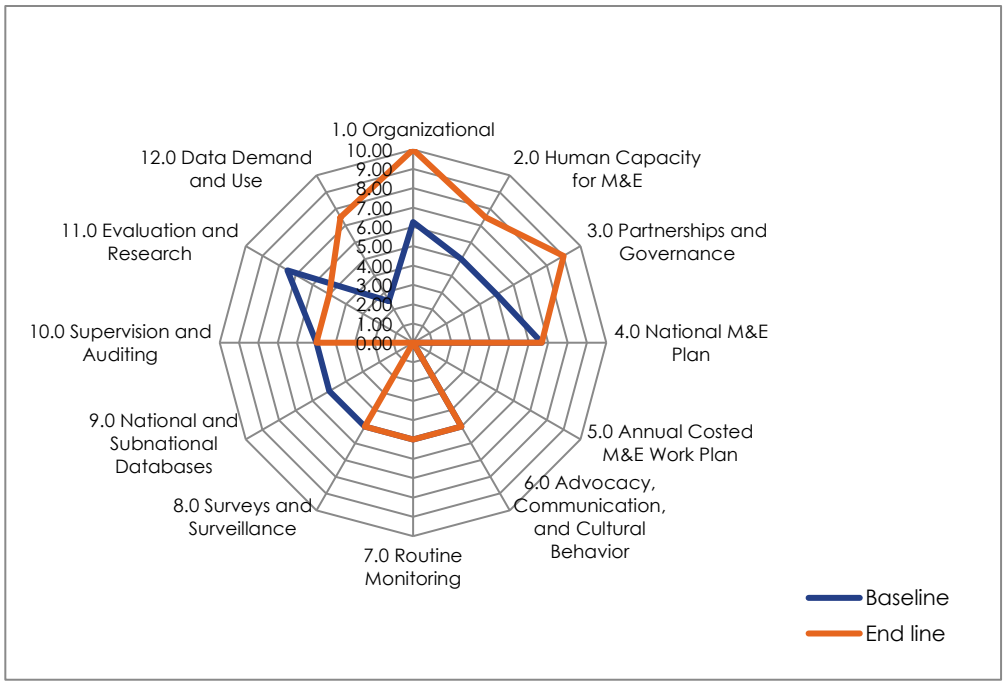
Figure 1b. Quality of capacity areas at NMCP



5.1.1.3 Technical Autonomy

Since baseline, the NMCP has become more technically autonomous in its organizational, human capacity for M&E, partnerships and governance, and DDU capacity areas; all other areas remained unchanged or decreased (see Figure 1c). In the organizational and human capacity for M&E areas, the NMCP became more technically autonomous in its ability to develop its mission, values, and ethics statements and to accomplish routine M&E tasks. In the partnership and governance capacity area, the NMCP became more technically autonomous in its ability to coordinate the national M&E TWG.

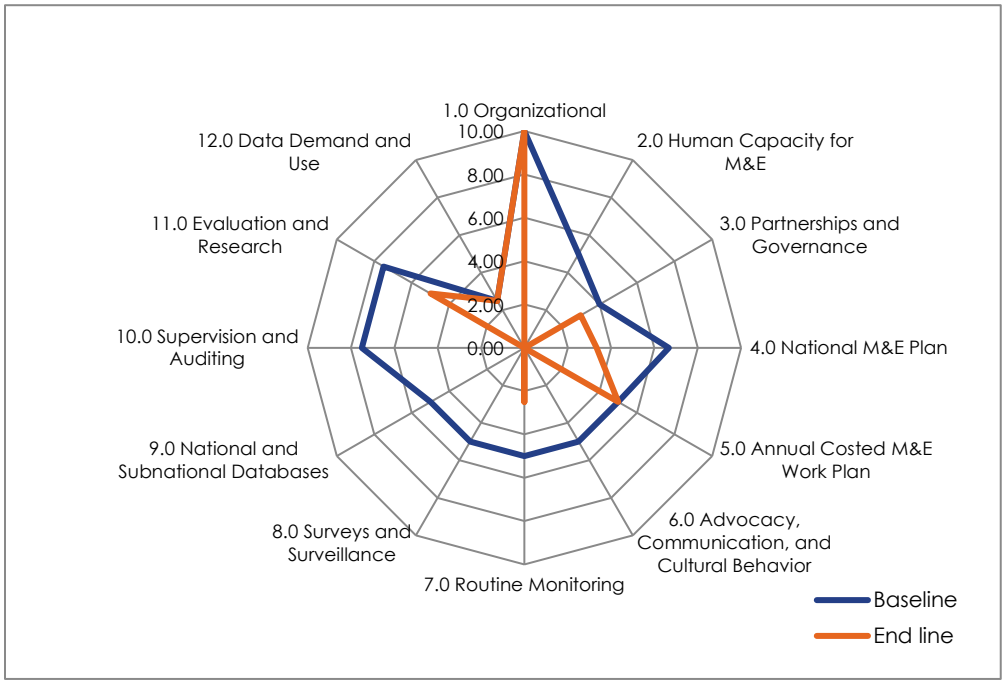
Figure 1c. Technical autonomy at NMCP



5.1.1.4 Financial Autonomy

For financial autonomy, performance in all capacity areas except organizational capacity decreased at end line (see Figure 1d). Some of the decreases in financial autonomy may be due to a change in the parameters used to assess financial autonomy at baseline and end line. At baseline, staff time was considered a financial investment, but this was not the case at end line.

Figure 1d. Financial autonomy at NMCP

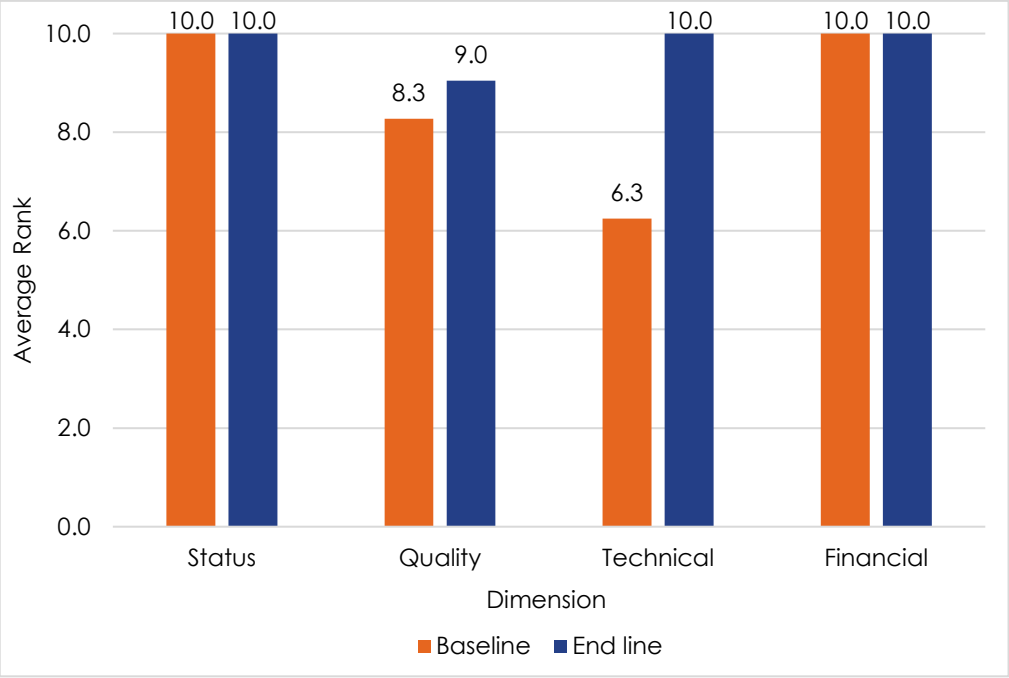


5.1.2 Performance by Capacity Area

5.1.2.1 Organizational Capacity

The organizational capacity at the NMCP was well established at baseline and was maintained at end line, with improvements in organizational quality and technical autonomy (see Figure 2). The program had a documented vision and stated mission and goals. M&E activities were aligned to their strategic plan goals and objectives. The only challenge was an inability of some officers to state the organizational core values, although they applied those values in their daily activities. Regular meetings are held, minutes were recorded, and actions were followed up and implemented. On occasion, however, monthly planned meetings of the M&E unit were not held when officers were out of the office for implementation activities at the subnational level.

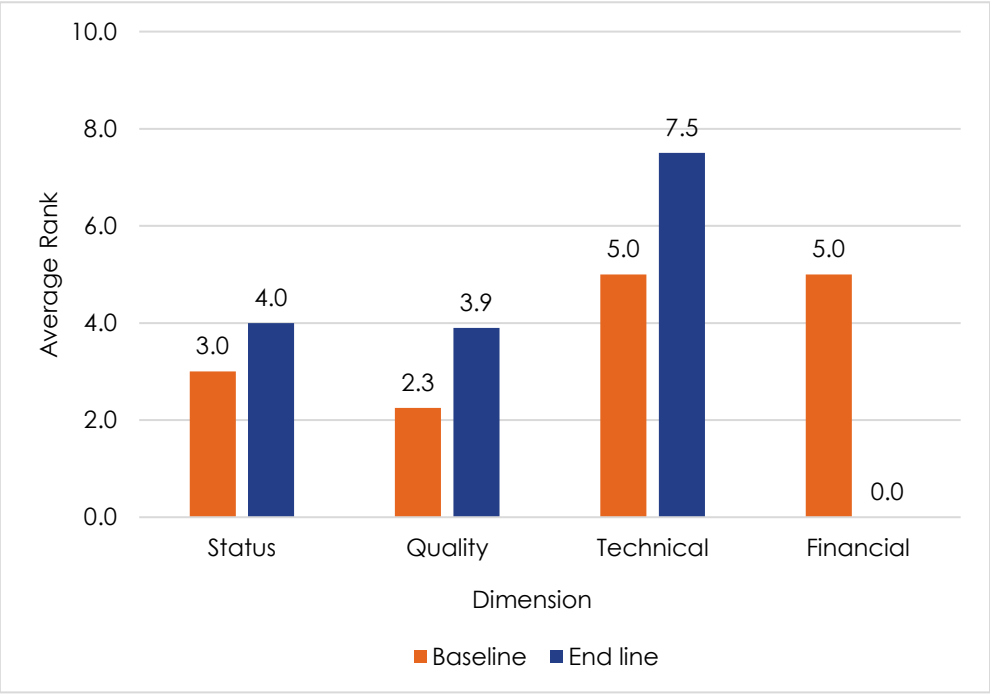
Figure 2. Organizational capacity



5.1.2.2 Human Capacity for M&E

The human capacity for M&E improved from baseline to end line, except in the financial autonomy area, in which there was still reliance on external financial assistance for capacity building (see Figure 3). The NMCP has a data manager, a health records officer, a statistician, and an epidemiologist/public health officer, and it hosts residents and interns in the Field Epidemiology & Laboratory Training Program as part of their training. The NMCP does not have a professional capacity building plan for staff, although senior cadre civil servants are scheduled to attend leadership and management trainings.

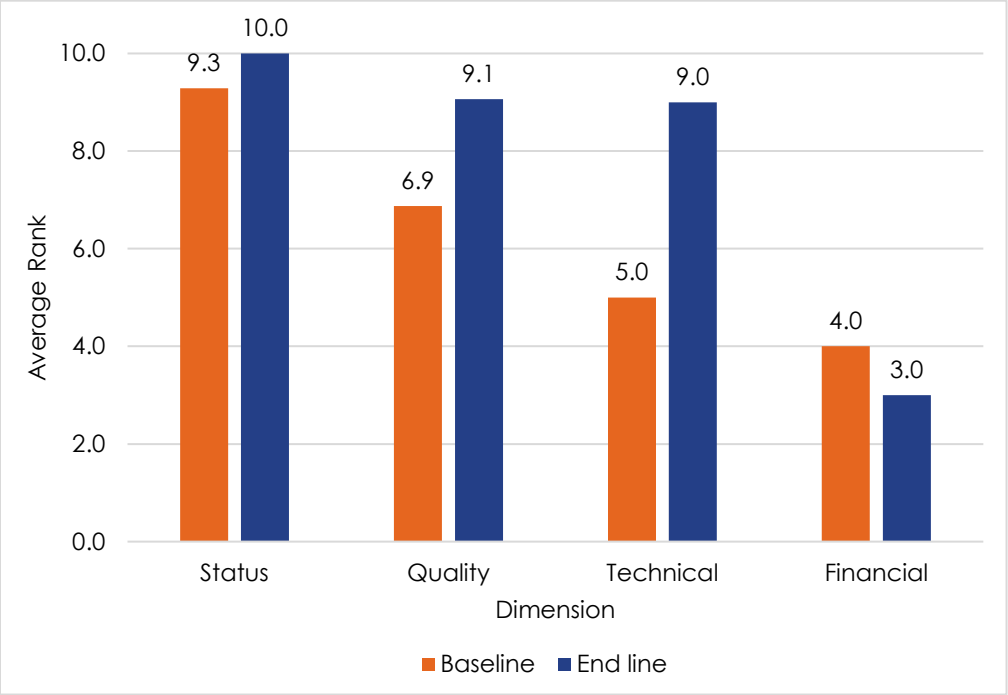
Figure 3. Human capacity for M&E



5.1.2.3 Partnerships and Governance

The NMCP has an approved the malaria strategic plan (KMS) and its accompanying M&E plan. These documents were developed with assistance from the World Health Organization (WHO) at the request of the MOH. All malaria partners were engaged in development process for the malaria strategic plan and the M&E plan. The M&E plan also defines roles and responsibilities related to M&E functions and activities, including data collection, data analysis, and data dissemination. A national TWG that includes partners and stakeholders meets quarterly to discuss M&E issues. Although financial support is not required for meetings, some support has been provided to enable stakeholders from subnational levels to attend meetings at the national level. This capacity area showed general improved from baseline to end line (see Figure 4). Status, quality, and technical aspects improved. The financial score decreased, from 4 at baseline to 3 at end line, which was attributed to the fact that the parameters used to assess the financial aspect in baseline were not the same as those used at end line; staff time was considered a financial investment during the baseline assessment but not at end line.

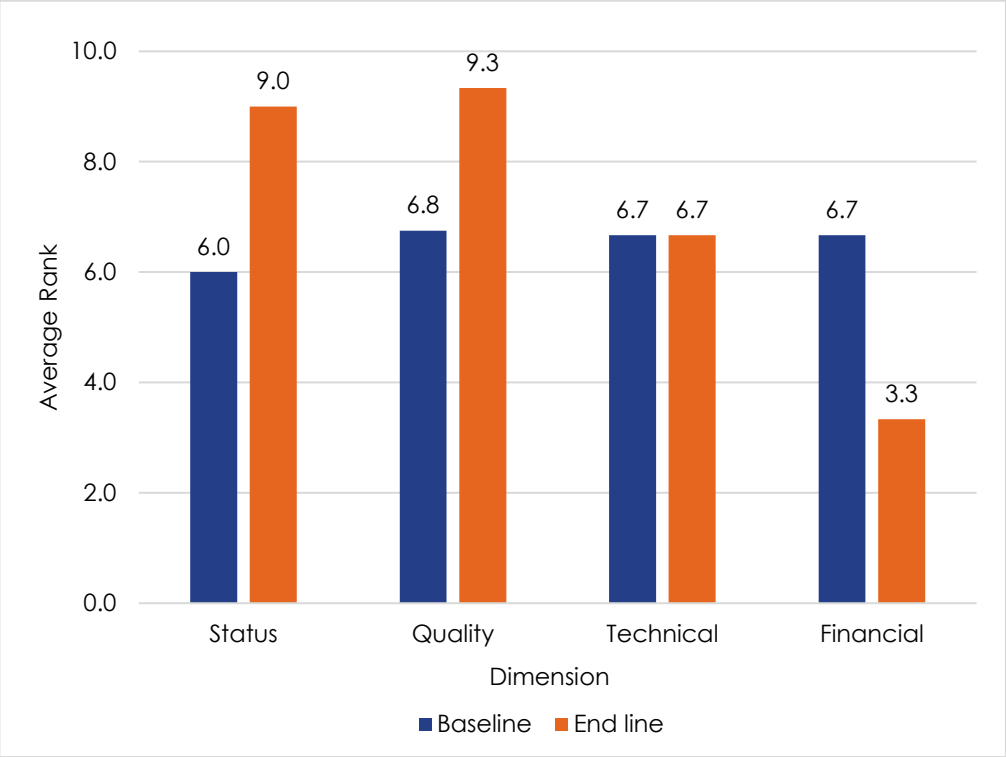
Figure 4. Partnerships and governance



5.1.2.4 National M&E Plan

The NMCP M&E plan is linked to the health sector M&E Plan. The indicators included are linked to both global and national goals for malaria control and are discussed and agreed upon by stakeholders. The status and quality of the M&E plan showed some improvement from baseline to end line (see Figure 5). The M&E plan was revised in 2014 and implemented recommendations from the findings of the baseline assessment, such as inclusion of a DDU plan and a chapter outlining implementation of DQAs. The technical and financial autonomy areas remained largely unchanged. The decrease in financial autonomy was attributed to differences in scoring autonomy at baseline and end line, specifically, that staff time was considered a financial investment during the baseline assessment but not at end line.

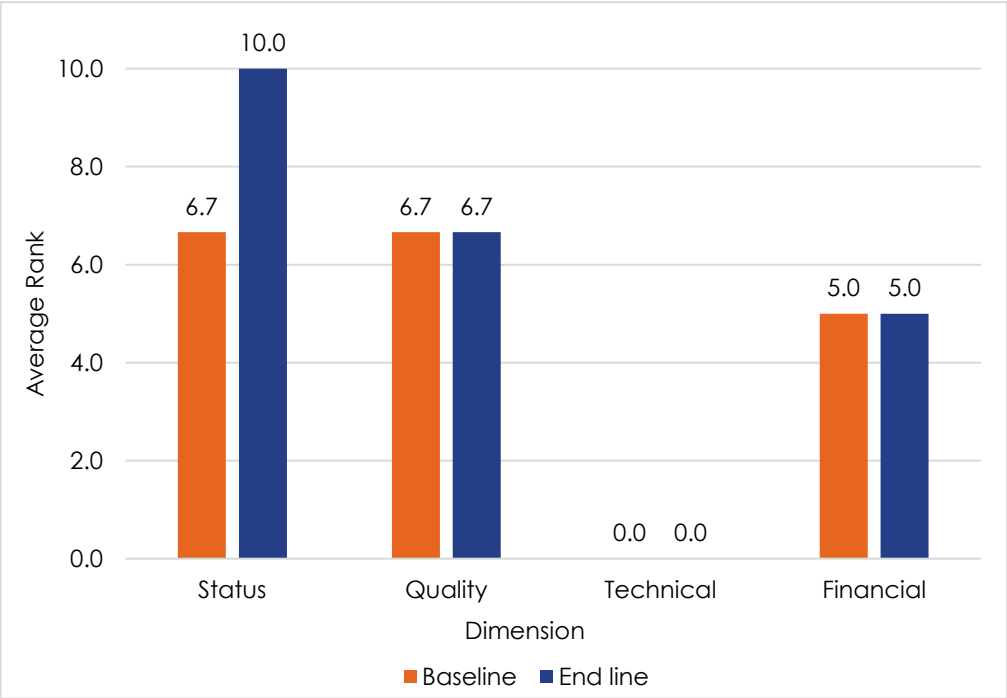
Figure 5. National M&E plan



5.1.2.5 Costed M&E Work plan

The current M&E work plan is linked to the MTEF, a five-year government expenditure planning cycle. M&E work plans are prepared annually by financial year and presented for endorsement by stakeholders at the M&E TWG meeting. Often the committed resources are not adequate to implement activities in the M&E work plan. The NMCP participants also pointed out that costs of implementation had increased significantly from what was initially planned, particularly for implementation of operational research studies, and therefore only one out of five studies could be implemented. Other than improvement in status of the work plans (costing, linkage to MTEF, commitment of resources), there was no change in performance of other capacity areas (see Figure 6).

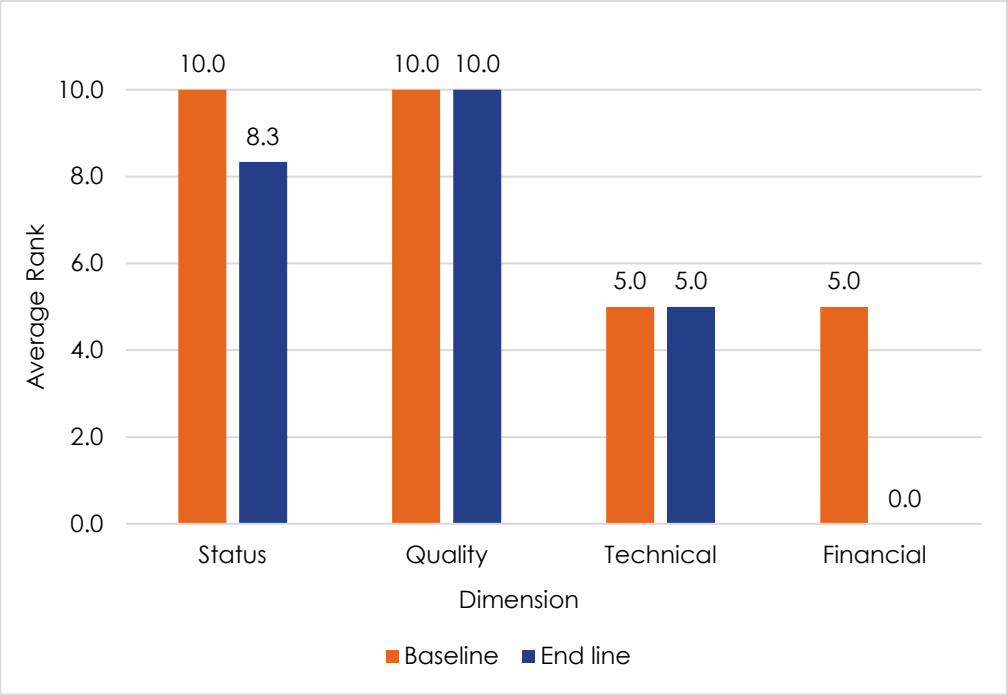
Figure 6. Annual costed M&E work plan



5.1.2.6 Advocacy, Communication, and Cultural Behavior

NMCP has a strong advocacy and communications program that also supports M&E activities. Within the program there is a strong recognition and understanding of the value of M&E, and resources are mobilized to ensure that key activities are implemented. Since baseline, the NMCP has developed a new communications strategy 2016–2021 with technical support from partners. The new strategy was launched on World Malaria Day 2017. From baseline to end line, there was little change in this capacity area except for a small decrease in status and a decrease in financial autonomy.

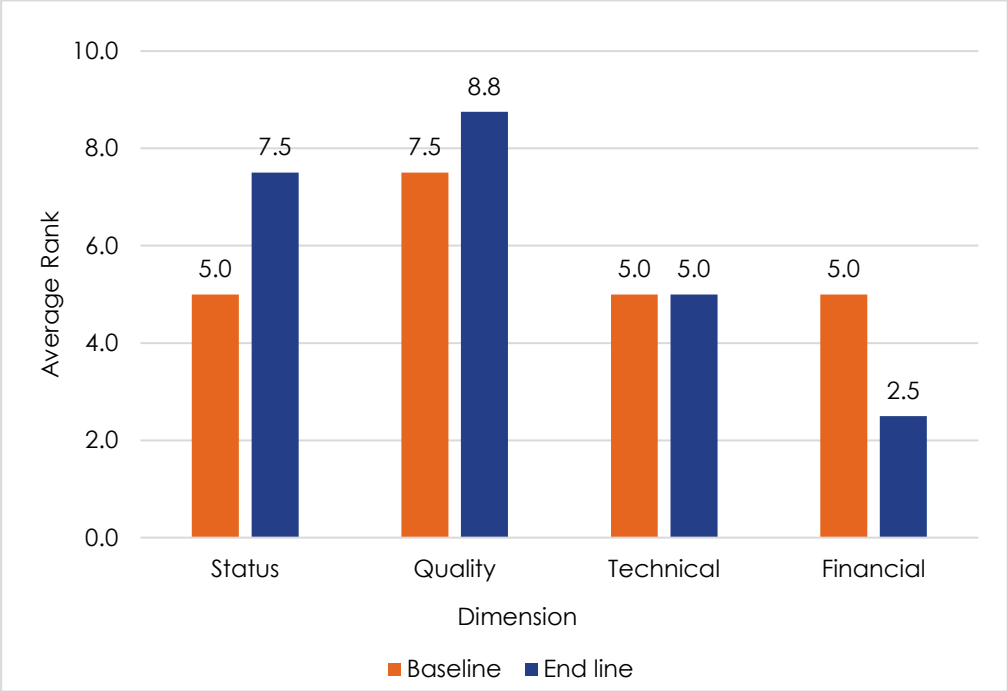
Figure 7. Advocacy, communication, and cultural behavior



5.1.2.7 Routine Monitoring

Routine monitoring actions, except for financial autonomy, improved from baseline to end line (see Figure 8). The decrease in financial autonomy was attributed to differences in scoring autonomy at baseline and end line, specifically, that staff time was considered a financial investment during the baseline assessment but not at end line. At end line, the NMCP still faced challenges with sufficient hardware and software for data management as well as unreliable internet connectivity. However, data collections tools were up to date or in revision to ensure standardization and the collection of data required for monitoring all indicators.

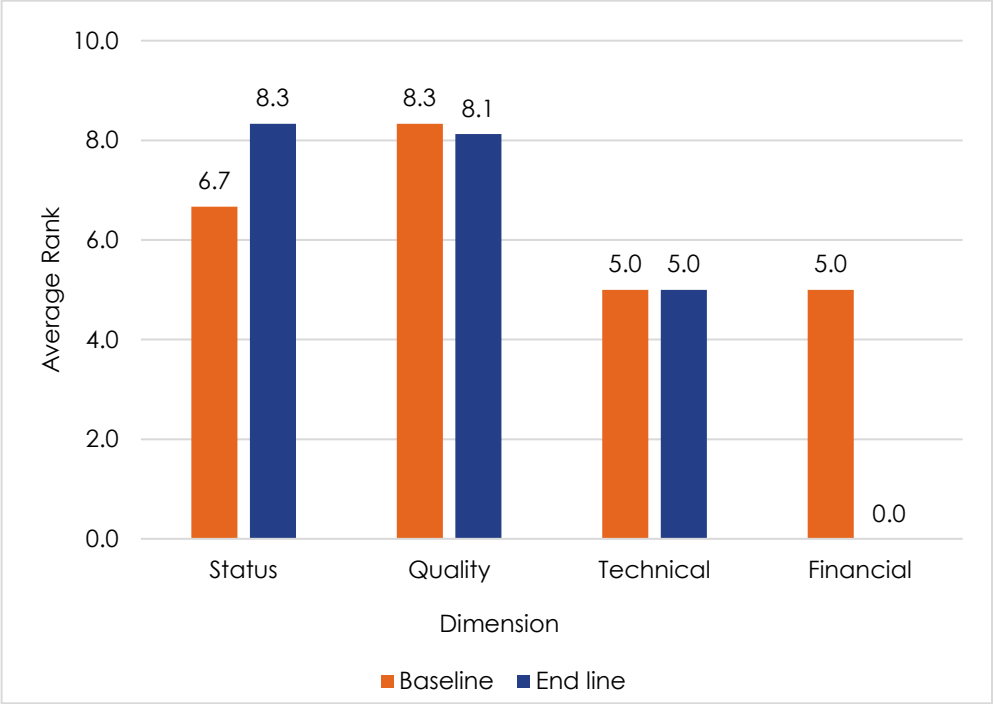
Figure 8. Routine monitoring



5.1.2.8 Surveys and Surveillance

Surveillance is a core intervention for the NMCP, and surveys are essential for understanding the impact of interventions. The NMCP has an inventory for surveys and surveillance activities, but it was not up to date at end line. The MIAS was not being used as intended at end line. The system needed to be reactivated to update the inventory, which will enable real-time follow-up of activities and tracking of actions. This capacity area showed improvement from baseline to end line in status (see Figure 9). The apparent decrease in financial autonomy is due to the change in scoring parameters used at end line.

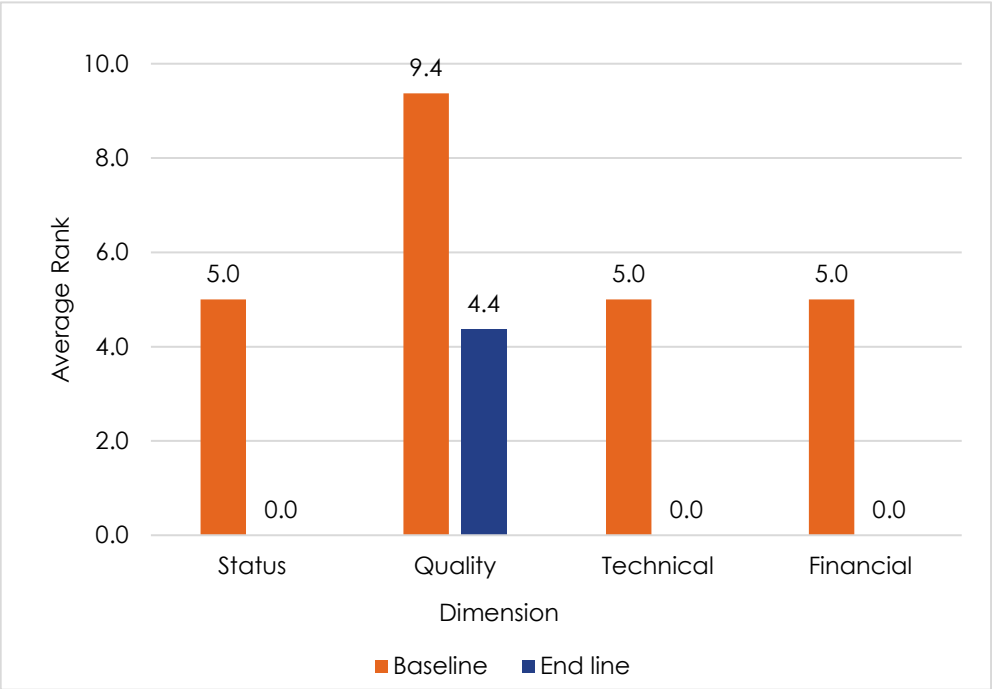
Figure 9. Surveys and surveillance



5.1.2.9 National and Subnational Databases

The national database for capturing and storing data, DHIS 2, is up to date and accessible at the national and subnational levels. There are varying levels of completeness for various data elements used by the NMCP. Service delivery data completeness is on average more than 90 percent, and commodity consumption and other logistics management data completeness is about 55 percent. The NMCP has MIAS as a potential database for all malaria data, and the system could be manually linked to DHIS 2. The lack of functionality of MIAS is the reason for poor performance in this capacity area from end line to baseline (see Figure 10). There are plans to reactivate MIAS as a repository for all malaria data, but external technical and financial resources would be needed.

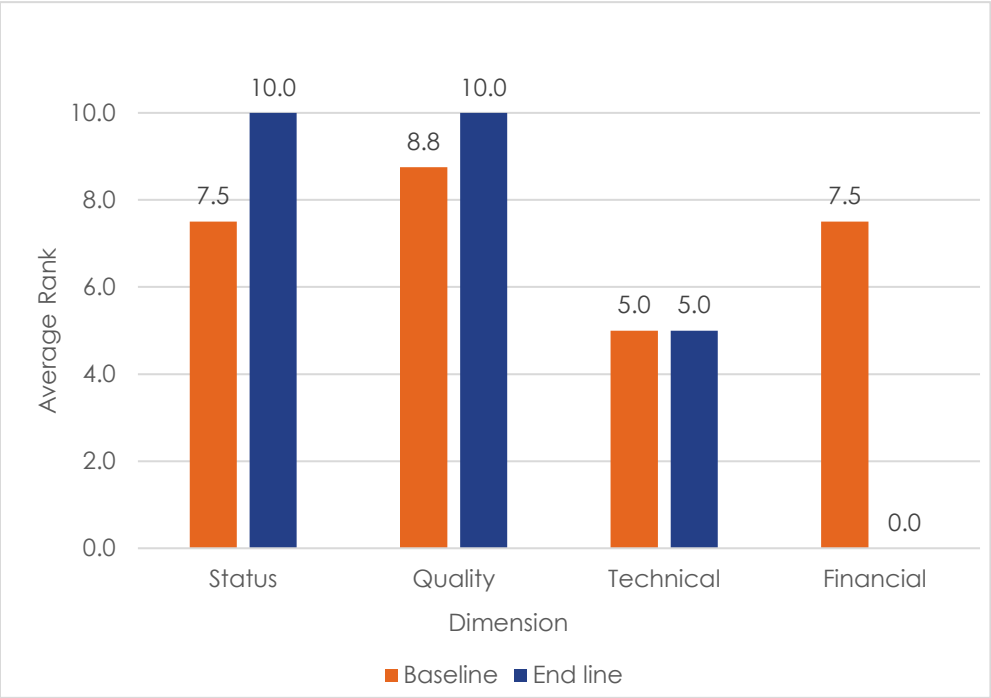
Figure 10. National and subnational databases



5.1.2.10 Supervision and Auditing

The NMCP has approved tools for supportive supervision and a supervision manual for use at the health facility level. A tool for the supervision of community health activities, including malaria, is lacking, but it will be developed as an integrated tool by the community health unit. Documented processes for DQAs were adapted from the Division of Health Informatics Monitoring and Evaluation. Implementation of supportive supervision and DQA activities are primarily supported by external financial resources. The status and quality of supportive supervision actions showed an overall increase from baseline to end line (see Figure 11). Technical autonomy remained unchanged, and financial autonomy decreased due to the change in scoring parameters from baseline to end line.

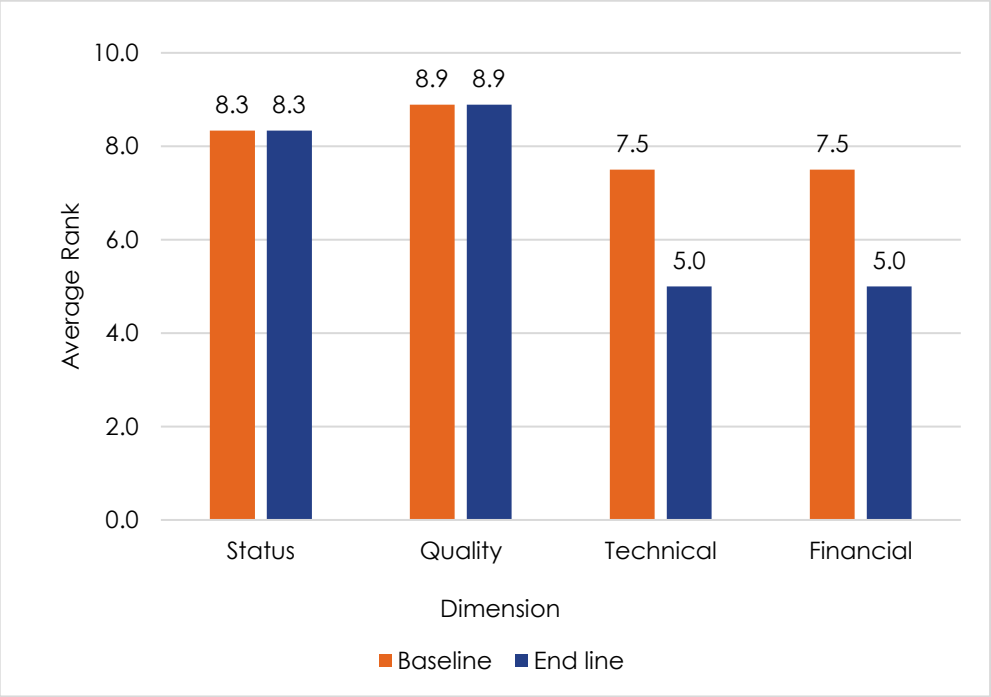
Figure 11. Supervision and auditing



5.1.2.11 Evaluation and Research

The NMCP and its stakeholders developed a priority research agenda that covered all thematic areas and was approved by the operational research TWG. It also has an electronic operational research stakeholder inventory. The NMCP hosts a national forum biennially to discuss and disseminate research findings. It relies on the technical capacities of national institutions mandated to carry out operational research to implement activities. National evaluations are implemented by the MOH. The NMCP relies on external financing to conduct some operational research studies and to host research dissemination forums. This capacity area had no change in terms of quality and status; however, there was a decrease in both financial and technical autonomy in the performance of evaluation and research (see Figure 12).

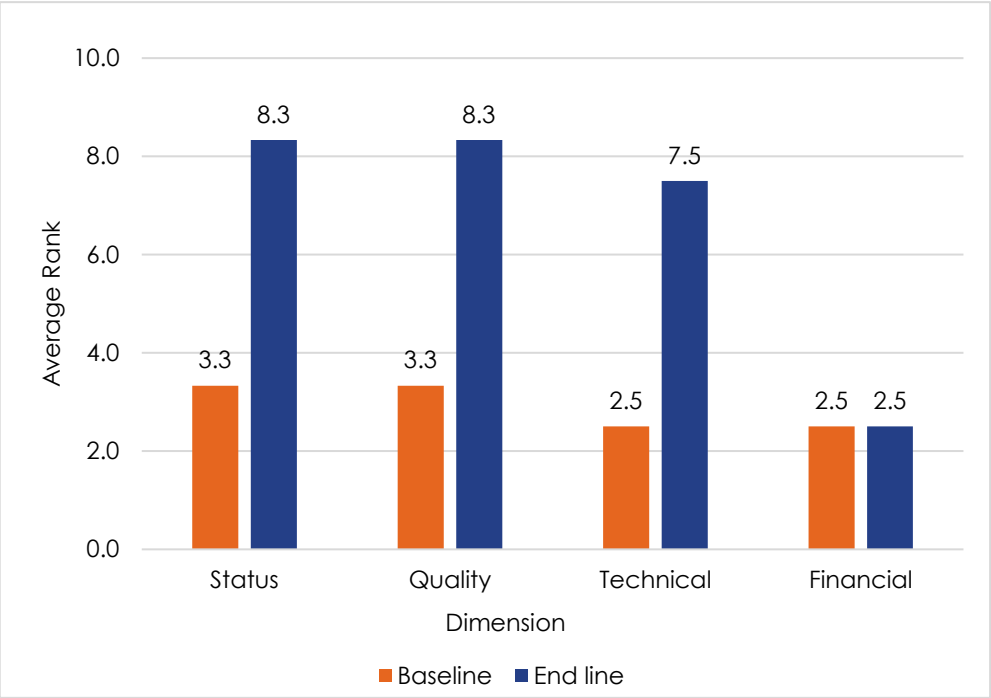
Figure 12. Evaluation and research



5.1.2.12 Data Demand and Use

The NMCP developed a national data use plan that was included in the annex of M&E plan. Participants in the end line workshop reported that this change was driven by having a DDU plan and knowledge of malaria surveillance (see Figure 13). The malaria surveillance training curriculum has some slides on how to present data, but the program still lacks formal data analysis and presentation guidelines.

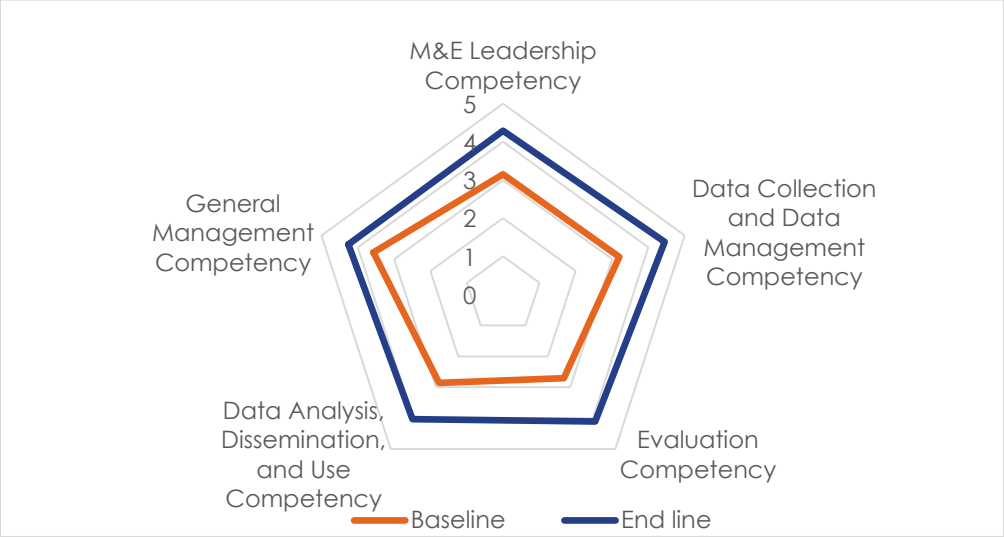
Figure 13. Data demand and use



5.2 Individual Capacity Assessment

An individual self-assessment tool was administered to assess the M&E competencies of the staff. The assessment showed an increase on average in all of the individual M&E competencies: M&E leadership, data collection and management, data analysis, data dissemination and use, and evaluation and general management. The NMCP participants who attended the meeting took part in the process and rated their skills, resulting in an overall composite score for each competency, on a scale of 0–5, with 0 being entry-level capacity and 5 being an expert. These average competency scores were compared with the baseline individual assessment data. The results show that at baseline, the team members on average scored between 2 (skilled) and 3 (proficient) in most areas, and at end line, the average score was between 4 (master) and 5 (expert), as shown in Figure 14.

Figure 14. Individual competencies



5.3 Most Significant Change and Outcome Mapping

5.3.1 Story Collection and Selection

Program officers engaged in M&E practices were invited to document their change stories during workshops. Afterward, the participants had opportunities to review their stories and select one or two based on their consensus of the significance of the stories to the process.

5.3.2 Domain 1: Strengthening Structures and Mechanisms for M&E Coordination

One of the MSCs identified for this domain is that the NMCP is better able to engage both national- and county-level partners to participate in joint planning and implementation of activities to ensure efficient use of resources. The NMCP noted that this change has been driven by having more comprehensive malaria M&E plan that includes a DDU plan that can be referred to in planning. The changes made to the M&E plan and the decision to add the DDU plan were driven by the results of the M&E capacity assessment in 2013. Before the counties had an M&E plan, partners would propose activities they would like to implement. Now the counties can follow the M&E plan when implementing the specified malaria activities and can review the activities in the plan and monitor their progress.

At the county level, the implementation of county M&E TWGs has played a role in helping the counties coordinate activities among partners. These county TWGs can discuss specific issues concerning malaria at the county level and have liaised with the NMCP for technical and financial support. This is significant, because before the devolution in 2013, all M&E activities were coordinated and planned at the national level. After the devolution, counties became responsible for all health interventions and needed to advocate for resources for their health needs and demonstrate the impact of their health investments.

This change is also supported by changes in capacity in the areas of partnerships and governance and national M&E plan. In the partnership and governance capacity area, the NMCP updated its strategic plan and supporting M&E plan in 2014. The NMCP also reported improvement in the maintenance of the stakeholder's inventory, which may have also helped in improving coordinating with partners. In addition, staff had improved knowledge of and adherence to the standard operating procedures that defined roles and responsibilities for M&E functions. Another capacity change that can support joint planning is the availability of the annual costed M&E work plan.

MEval-PIMA's contributions:

- Technical assistance in identifying gaps through the administration of the MECAT group assessment
- Technical assistance in revising the M&E plan and developing the DDU plan that was added to the M&E plan
- Financial assistance in revising the M&E plan through the provision of a consultant
- Technical assistance in setting up and organizing the county TWGs
- Assistance in developing terms of reference for the county TWGs
- Financial support for holding the national and county TWGs

5.3.3 Domain 2: Ensuring Availability of Quality Data

One of the MSCs identified in the availability of quality data is that counties are now able to analyze and understand their data more clearly and have been taking responsibility for the quality of their data submitted to the national HIS. This change has been driven by an increase in capacity for the NMCP and counties to conduct DQAs independently. Before 2013, the NMCP had not conducted a DQA. As shown in the MECAT group assessment results, following the baseline assessment, the NMCP approved a new DQA policy. MEval-PIMA provided technical assistance to the program to customize the DQA tools for the malaria indicators. The NMCP also played a significant role in training and mentoring the counties to conduct their own DQAs. In addition, the NMCP reported that the integrated disease surveillance and reporting system had improved facility reporting rates since the baseline assessment, which may have improved the availability of high-quality data.

Another MSC identified for this domain is that the NMCP and counties are able to monitor key malaria indicators using the core malaria surveillance graphs. These key indicators and core surveillance graphs are found in the quarterly malaria surveillance bulletins and the county profiles. The malaria bulletin is shared with the national, county, and subcounty levels and uses data from the national information systems. The regular production and review of the bulletins at all levels has led to improvements in data quality. Previously, the NMCP relied on external technical assistance to develop these bulletins; now the NMCP can develop them independently. The NMCP also reported that it can also analyze its own data due to the provision of Stata software. The availability of malaria data in DHIS 2 also drives the production of the quarterly surveillance bulletins. In addition, the cascade of malaria M&E and surveillance training has helped train health workers in the reporting of malaria data. The results from the MECAT group assessment further support this change, showing an improvement in the availability of adequate M&E staff in the program and the ability to independently carry out routine M&E functions, including developing quarterly malaria

surveillance bulletins, the performance framework, scorecards, and briefs, as well as the ability to conduct DQAs.

5.3.4 Domain 3: Promoting Data Use Practices

One of the MSCs identified in this domain is that the NMCP and the county malaria control coordinators now hold regular meetings to discuss the malaria data collected through surveys and reported in DHIS 2, and they develop actions based on these data. For example, counties are able to identify malaria hotspots within their counties and use the county profiles to make informed decisions on malaria control strategies to be employed. This change is also important because with the devolution, the counties are now responsible for understanding their own data and health concerns and advocating for resources to implement evidence-based programs.

An increase in demand for data by top management in MOH was also identified as an MSC. Due to increased M&E coordination within the program and increased leadership capacity and malaria M&E knowledge, NMCP staff reported that other units in the MOH were seeking out the KMS and M&E plan as well as guidance on M&E from NMCP staff.

MEVAL-PIMA's contributions:

- Technical and financial support to develop and pilot the DDU training curriculum
- Technical and financial support to develop the malaria surveillance training curriculum and roll out the training
- Development of the DDU plan
- Capacity building, such as formal training on malaria M&E, DDU training, surveillance training, and informal mentorship of the data manager and county malaria control coordinators

5.3.5 Domain 4: Building M&E Leadership Competencies

The MSC identified in this domain is that the NMCP can plan, organize, budget, implement, and evaluate malaria activities and coordinate with partners on resolving malaria issues. Staff are more independent in handling M&E issues and are able to use the M&E plan as a reference. Participants reported that identifying gaps in M&E capacity through the baseline MECAT group assessment helped them focus on where to build capacity over the last five years. This change in the ability to manage M&E activities was driven by improvements in knowledge and skills for M&E leadership and an increased demand for evidence-based reports for decision making and the ability to use data from the malaria indicators in planning. Staff mentioned that it was important that the malaria indicators, their definitions, and information on where to find the data were included by objective and strategy in the revision of the M&E plan. One participant gave an example of being able to conduct the post-mass LLIN distribution survey independently, including leading the protocol preparation and approval, developing the budget, mobilizing resources, recruiting data collection staff, implementing the survey, analyzing the data, and disseminating data to stakeholders.

MEVAL-PIMA's contributions:

- Technical assistance to customize the DQA tool

- Technical assistance to counties to conduct DQAs
- Identification of gaps in M&E capacity through the MECAT group assessment
- Provision of financing for capacity building

5.3.6 Domain 5: Building Capacity of MOH staff

One of the MSCs that NMCP reported for this domain is that the program itself is now able to build M&E capacity through well-trained staff who can pass on the training through training of trainers and mentor other staff. Since baseline, training curricula for malaria M&E, malaria surveillance, and DDU have been developed for the program and cascaded to the malaria priority counties. This change in capacity is supported by findings from the MECAT group assessment and individual assessment. The assessment shows that the NMCP has acquired more staff with skills specific to M&E and has a data manager, a health records officer, a statistician, and an epidemiologist/public health officer, and it hosts residents and interns in the Field Epidemiology & Laboratory Training Program as part of their training. Since baseline, M&E staff have improved in their technical autonomy to complete routine M&E tasks. NMCP staff produce periodic briefs, bulletins, and a quarterly scorecard as well as Global Fund quarterly dashboards. They also implement national surveys and support or participate in DQAs.

Another MSC identified for this domain is that the NMCP is now better able to advocate for training based on identified gaps (internal and external support). For example, the NMCP added a line in the Global Fund budget to support M&E processes such as trainings identified as gaps per interest of staff.

MEval-PIMA's contributions:

- Technical assistance and financial assistance to develop curriculum (DDU, surveillance)
- Technical assistance and financial assistance to pilot and roll out trainings
- Technical assistance and financial assistance to develop surveillance bulletins and annual reports
- Capacity building
- Financial assistance for regional and international trainings

5.3.7 Conclusions from MSC

The MSC stories show that there were remarkable changes in the skills and practices of M&E for malaria at the NMCP. The changes occurred at both the national and county levels, with the county malaria coordinators and M&E officers gaining competencies and implementing M&E activities with little or no external technical support and minimal supervision. The MSC process provided some descriptive notes to the trends seen with the quantitative analysis of the MECAT group assessment, particularly for some of the impacts on the M&E officers. Although the MSC process is limited by its bias toward positive changes, no negative effects of the MEVAL-PIMA project were mentioned.

5.3.8 Results of the Outcome Mapping Process

Table 1 presents findings from individual and group discussions with participants to determine the future impact of the M&E capacity building provided by MEval-PIMA. The focus was how the NMCP would use

the knowledge and skills gained to address threats to the sustainability of existing M&E capacity building initiatives and support provided.

Table 1. Mapping outcomes for sustainability of M&E practices at the NMCP

M&E capacity domain	Threats to sustainability	Expected changes in behavior	Partnerships to be developed	Activities to be undertaken
Strengthening structures and mechanisms for M&E coordination	• Failure to implement the M&E and DDU plans • Insufficient resources to fully implement the M&E activities in the plan	• Increased use of DDU plan • Establishment of M&E coordination structures at the county level • Increased domestic financing for M&E activities	• County health departments (CHDs) • County government • MOH • Public-private partnerships	• Sensitize stakeholders on DDU plan in regional review meetings • Hold review meetings with CHDs • Finalize resource mobilization plan • Appoint malaria champion for high-level advocacy
Strengthening structures and mechanisms for M&E coordination	• Lack of effective leadership for the operational research TWG	• Research and academic institutions strengthen leadership of operational research TWG	• Research and academic institutions • Health Research Unit of MOH • USAID, UK Department for International Development (DFID), WHO Global Fund, national government	• Review terms of reference for leadership of TWG • Build leadership capacity among members • Advocate for regular resources to convene stakeholders
Ensuring availability of quality data	• Reliance on external financing for DQA and supportive supervision activities • Critical mass of health workers trained on malaria surveillance not achieved	• County leadership and ownership of M&E activities • Allocation of county resources dedicated to DQAs • County work plans include DQAs and supervision • More health workers trained on M&E and malaria surveillance activities	• County government • CHDs • Health management information system • USAID, DFID, WHO Global Fund, national government	• Advocate with boundary partners to support quality data • Advocate for operational research activities • Mobilize resources for M&E and surveillance activities

M&E capacity domain	Threats to sustainability	Expected changes in behavior	Partnerships to be developed	Activities to be undertaken
Promoting data use practices	• Lack of guidelines and manuals for health workers	• Health workers use guidelines to support M&E actions • Health workers use data for action planning to improve service delivery • Improved quality of services delivered	• External donors and implementing partners (USAID, DFID, WHO, Kenya Medical Research Institute-Wellcome Trust) • MOH • County government • CHDs	• Develop and review guidelines • Produce and print guidelines and manuals • Disseminate guidelines and manuals • Advocate for appropriate use of guidelines and manuals
Promoting data use practices	• Lack of documentation on procedures to produce M&E and information products	• Incoming staff and officers can produce M&E and information products following simple guidelines	• USAID, DFID, WHO Global Fund, national government • MEval-PIMA	• Develop guidelines and manuals to produce information and M&E products
Building M&E leadership competencies	• Lack of staff assigned to M&E duties • High staff turnover • Competencies dependent on specific individuals	• All staff continually carry out on the job training and mentorship to ensure that the knowledge and skills in M&E are transferred	• Other MOH units (e.g., Health Information Systems) • CHDs	• Establish environment that promotes skills transfer • Create time for skills sharing, on-the-job training, and mentorship sessions • Develop knowledge management practices within the M&E Unit • Encourage participation in activities for information sharing by officers

M&E capacity domain	Threats to sustainability	Expected changes in behavior	Partnerships to be developed	Activities to be undertaken
Building capacity of MOH staff in M&E	• Lack of political goodwill and buy in for M&E at national and county levels	• Leaders and management accept the important role of M&E in implementation of health programs • Domestic resources allocated for capacity building of M&E	• County government • County health teams • MOH • External donors and implementing partners (USAID, DFID, WHO, Global Fund)	• Present data through visuals, and info graphics that are simple and easily understood at all levels • Advocate with and sensitize leaders to create awareness of the role of M&E • Engage in resource mobilization activities • Share health data on performance with all stakeholders regularly

6. DISCUSSION

There have been great improvements in the M&E system for the NMCP and its priority counties over the last five years. The baseline assessment identified human capacity for M&E and data demand and use as two of the weakest capacity areas in the M&E system. Based on those findings, MEval-PIMA proposed that the program work on improving planning coordination, leadership, and management structures; increase confidence in routine health information systems; improve DDU; and sustain capacity building in the context of devolution.

Many of the most significant changes identified involve being able to better coordinate activities and stakeholders and resulted from the development or strengthening of structures for coordination and planning. At baseline, the NMCP had many M&E structures and processes already in place, such as the M&E TWG, national M&E plan, and costed annual work plan. However, with the devolution of responsibility for health programming to the counties, it became clear that the NMCP would need to revise its structures and create new ones to assist the counties in preparing a plan to implement, monitor, and evaluate their own health programs, including advocating at the county level for the resources to carry out their programs. Technical and financial support for the national M&E TWG and county M&E TWGs proved successful in helping these governing bodies coordinate M&E activities and best utilize resources among partners. In addition, revisions to the M&E plan and the addition of the DDU plan helped the program engage both national- and county-level partners to participate in joint planning and implementation of activities to ensure efficient uses of resources.

In the same period, there was increased confidence in the data provided through the routine information system due to improved reporting and quality of data, enabled by technical and financial assistance provided by MEval-PIMA for DQAs. In order to improve DDU within the program, MEval-PIMA provided technical assistance to the NMCP to add a DDU plan to its national M&E plan and developed a DDU training curriculum that was rolled out at the national, county, and subcounty levels. The program now reports that the counties have been able to use their data to identify malaria hotspots and use the county profiles to make informed decisions about malaria control strategies.

In addition to setting up structures for M&E at the county level, developing human capacity at the county level is also important to sustain M&E capacity after the devolution. At end line, human capacity for M&E was still one of the lowest-scoring capacity areas in the assessment. During the assessment, however, staff reported that they believed staff had improved in their capability to carry out M&E activities and cited trainings that MEval-PIMA developed as the main drivers of this change. Training topics such as malaria M&E, malaria surveillance, and DDU, were all identified as areas in which staff needed to build capacity at both the national and subnational levels. MEval-PIMA helped the NMCP develop the curricula for these three topics and then held a training of trainers for staff in the national-level unit so they could in turn train staff at the subnational levels. Therefore, not only was capacity built in those skills, but capacity was also built within the program to build its human capacity. Informal mentoring by both MEval-PIMA and national-level staff was also effective in building skills and confidence to carry out M&E activities more independently. Through the training and informal mentorship, NMCP staff gained more confidence in being able to plan, implement, and manage M&E activities. The impact of these trainings and mentorship underscores the importance of equipping staff with the requisite skills for M&E. One challenge that remains in human capacity for M&E is staff turnover, especially in the counties, underscoring the importance of having succession plans and trainers who can build capacity for new staff. At end line, the NMCP still lacked a human capacity building plan, which could help in planning for training staff in critical M&E competencies.

As shown in Figure 1c, although some improvements were made in becoming more technical autonomous, the NMCP is still growing in its technical autonomy for other M&E capacity areas. A deep financial dependence for support for many M&E activities remains, including routine activities such as holding TWG meetings, conducting DQAs, printing materials, and publishing information products. One lesson seen throughout the many changes in the various capacity areas of the MECAT group assessment was that the identification of gaps helped the NMCP decide where it needed to build its capacity over the last five years. The action plan developed from the baseline capacity assessment helped the program to identify and make plans for addressing gaps such as certain skills in which staff needed training or items missing from the M&E plan, such as the DDU plan.

7. RECOMMENDATIONS

Overall, the NMCP demonstrated a high level of capacity for M&E and has made great strides toward improving its M&E system over the last few years with the support of MEval-PIMA and other partners. To maintain the high function of the M&E system, the NMCP and its partners must strive to sustain these changes while continuing to make improvements in areas flagged for further action. The following have been identified as threats to sustaining the MSCs identified in Section 5. We have summarized these threats and provided recommendations for achieving sustainability as proposed by the participants in the assessment.

As identified in many of the capacity areas of the MECAT group assessment and in MEval-PIMA's contribution to the MSCs, the NMCP has been receiving external financial support for many M&E activities and capacity-building activities. One threat to sustaining these activities is insufficient resources to fully implement the M&E activities in the M&E plan and capacity-building activities, including conducting DQAs, producing the quarterly surveillance bulletin, and training M&E staff in malaria surveillance.

Recommendations for mitigating this threat:

- Advocate with the Government of Kenya, national and county treasuries, and county governments for more funding using a resource mobilization plan. The NMCP can use findings from the MECAT group assessment to identify gaps in capacity and areas in which the program lacks financial autonomy. NMCP should partner with county health departments and liaise with county politicians to get budgets approved.
- Use program-based budgeting to plan for activities that will occur the next year. This will help ensure more accurate budgets that reflect actual program needs and can respond to data changes more easily than MTEF.

Another threat to the gains in human capacity for M&E both in analytical and leadership skills is the threat of losing key trained staff. Staff in the NMCP are being sought for their skills and expertise in M&E and are being pulled from their malaria-specific tasks to advise in high-level M&E meetings or provide support to other units.

Recommendations for mitigating this threat:

- Ensure that a critical mass of staff is trained with the appropriate analysis and leadership skills.
- Continue to use cascade training so that staff who can build capacity of others are embedded in the program.
- Develop and implement succession plans to ensure an appropriate transfer of knowledge and procedures when staff transition from the program.
- Advocate with the Government of Kenya for more funding for training.
- Use the health information system to develop a structure for sharing knowledge about M&E best practices to reduce the burden on NMCP staff to share their skills and knowledge.

In addition to sustaining its high-functioning M&E system, the NMCP should also continue to work on improving its capacity in the following areas identified during the MECAT group assessment as areas for improvement:

- **Improve the NMCP database.** At both baseline and end line, MIAS was not being used by staff the way it was intended and therefore it did not remain up-to-date. The NMCP should develop a plan for reactivating this system. However, it will need buy-in from users to do so.
- **Develop a costed human capacity building plan.** At end line, the NMCP still did not have a costed human capacity-building plan. This plan is important because it can help the NMCP anticipate training needs and the resources to support these training needs. The plan can be used to advocate for funding allocations from the Government of Kenya and other partners for trainings to keep staff up-to-date on the latest methods and skills in malaria M&E.

- **Develop surveillance guidelines.** NMCP staff were trained on surveillance and have increased their capacity to conduct surveillance work independently; however, there are no written guidelines to support everyday work in this area. Written guidelines would also be helpful in orienting new staff to the routine surveillance work of the program.
- **Revise the HIS data collection tools to address identified gaps.** There are still gaps in some of the HIS data collection tools for malaria data, such as the reporting on LLINs distributed through routine clinics. These gaps should be addressed, and hardcopies of the tools should be made available to those collecting the data to standardize the collection process.

APPENDIX A. BASELINE AND END LINE ASSESSMENT METHODS

Table A1. Baseline assessment methods

Tool	Method	Target	Questions addressed
Excel-based Monitoring and Evaluation Capacity Assessment (MECAT) group assessment workbook	Participatory group assessment	National Malaria Control Program (NMCP) staff, including program managers and program officers, monitoring and evaluation (M&E) officers, and data managers	• What is the status of M&E activities? • What is the capability in M&E capacity areas?
Excel-based MECAT individual assessment workbook	Individual self-assessment	M&E staff	
Desk review guidance	Desk review	Organizational documentation (policy and strategic documents and reports on health and measurements)	• What are the objectives and expectations for the organization's M&E? • What is the organization's capacity for M&E? • How well is the organization performing against its objectives and expectations for M&E?
Key informant interview guide	Key informant interviews	M&E stakeholders and program and other technical staff	

Table A2. End line assessment methods

Tool	Method	Target	Questions addressed
Excel-based MECAT group assessment workbook	Participatory group assessment	NMCP staff, including program managers and program officers, M&E officers, and data managers	• What is the status of M&E activities? • What is the capability in M&E capacity areas?
Excel-based MECAT individual assessment workbook	Individual self-assessment	M&E staff	
Most significant change guide	Focus group discussion	NMCP program managers and program officers, including M&E officers and data managers	• What are the most significant changes in the M&E system since baseline? • What were the drivers of these changes? • What role, if any, did MEASURE Evaluation PIMA have in these changes?
Outcome mapping	Focus group discussion	NMCP program managers and program officers, including M&E officers and data managers	• What are the threats to sustainability of the most significant changes identified? • What are recommendations to mitigate these threats to sustainability?

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