



Baseline Assessment to Establish the Existing Capacity of the Division of Malaria Control to Undertake Monitoring and Evaluation Functions

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ACRONYMS AND ABBREVIATIONS

ACSM	Advocacy, Communication and Social Mobilization
ACT	Artemisinin-based combination therapy
ANC	Antenatal care
AOP	Annual Operation Plan
AWP	Annual Work Plan
CPs	Conditions Precedent
CWC	Child Welfare Clinic
DCHS	Division of Community Health Services
DDIU	Data Demand and Information Use
DDSR	Division of Disease Surveillance & Response
DDSR	Division of Disease Surveillance and Response
DDU	Data Demand and Use
DFID	Department for International Development
DHIS-2	District Health Information System-2
DHMT	District Health Management Team
DMCC	District Malaria Control Coordinator
DOMC	Division of Malaria Control
DQA	Data Quality Assurance
EPR	Epidemic Preparedness and Response
GFATM	Global Fund to Fight AIDS, Tuberculosis, and Malaria
GIS	Geographic Information System
GOK	Government of Kenya
HIS	Health Information System
HIV	Human Immunodeficiency Virus
HMIS	Health Management Information System
IDSR	Integrated Disease Surveillance & Response
IEC/BCC	Information, Education and Communication/Behavior Change Communication
IP	Inpatient
IPT	Intermittent Preventive Treatment
IPTp	Intermittent Preventive Treatment in Pregnancy
KEMRI	Kenya Medical Research Institute
KEMSA	Kenya Medical Supplies Agency
KII	Key Informant Interview
KSG	Kenya School of Government
LLIN	Long-lasting insecticidal net
LMIS	Logistics Management Information System
M&E	Monitoring and Evaluation
MBP	Malaria Business Plan
MEASURE	Monitoring and Evaluation to Assess and Use Results
MECAT	Monitoring and Evaluation Capacity Assessment Tool
MESST	Monitoring and Evaluation System Strengthening Tool
MIAS	Malaria Information Acquisition System
MICC	Malaria Inter-Agency Coordinating Committee
MOH	Ministry of Health
MOP	Malaria Operational Plan
MTEF	Medium Term Expenditure Framework
NASCOP	National AIDS and Sexually Transmitted Diseases Control Programme

NGO	Non-Governmental Organization
NHIS	National Health Information System
NHSSP II	National Health Sector Strategic Plan II (2004–2010)
NMS	National Malaria Strategy
NPR	National Program Review
OD	Organizational Development
OR TWG	Operations Research Technical Working Group
OR	Operations Research
OTP	Organizational Transformation Process
PC	Performance Contract
PDA	Personal Digital Assistant
PHMT	Provincial Health Management Team
PMCC	Provincial Malaria Control Coordinator
PMI	The President's Malaria Initiative
PR	Principal Recipient
RBM MERG	Roll Back Malaria Monitoring and Evaluation Reference Group
RBM	Roll Back Malaria
RDT	Rapid Diagnostic Test
RHIS	Routine Health Information System
SMART	Specific, Measurable, Accurate, Reliable and Timely
SOP	Standard Operating Procedure
SP	Strategic Plan
SS	Supportive Supervision
TA	Technical Assistance
TOR	Terms of Reference
TWG	Technical Working Group
UNAIDS	United Nations Joint Program on HIV/AIDS
UNICEF	The United Nations Children's Fund
USAID	United States Agency for International Development
VLDP	Virtual Leadership Development Program
WHO	World Health Organization

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EXECUTIVE SUMMARY

BACKGROUND

The Division of Malaria Control (DOMC) is one of several national public health programs under the department of disease prevention and control of the Kenya Ministry of Health. In 2009, DOMC underwent a national program review (NPR). Until then, the National Malaria Strategy (NMS) 2001–2010 was in operation, and the DOMC decided that it was time for the country to take stock of its achievements under this plan. The product of these deliberations was a new National Malaria Strategic Plan 2009–2017 that calls for a multisector approach to achieve the NMS objectives, together with decentralization of services to the districts and provinces and in line with the National Health Sector Strategic Plan II (NSSP) 2015–2010. The importance of monitoring and evaluation (M&E) is recognized as a strategic objective in the Kenya National Malaria Strategy 2009–2017, with the focus of one of the specific objectives on strengthening surveillance through M&E systems to routinely monitor and evaluate malaria indicators. Continued strengthening of the DOMC M&E capacity requires a thorough understanding and documentation of the current capacity to perform its M&E functions as part of wider efforts to improve the Ministry of Health M&E systems in Kenya.

ASSESSMENT OBJECTIVES

The overall objective of the baseline assessment was to understand current capacity in M&E performance objectives and gaps to determine the most appropriate interventions for the DOMC and to monitor and evaluate success in M&E capacity strengthening at DOMC.

The assessment has three specific objectives:

1. Understand, document, and clarify performance objectives for program-level M&E.
2. Determine the current status of DOMC performance in key M&E functional areas.
3. Identify gaps in DOMC's capacity to meet performance objectives.

METHODOLOGY

The assessment focused on DOMC as an organizational unit at the national level and its stakeholders. Data for this assessment were collected by the MEASURE Evaluation assessment team under a mixed-methods approach, which included a secondary data collection (desk review of existing documentation) and a primary data collection through key informant interviews, a group assessment tool, and an individual assessment tool.

KEY FINDINGS

Many of DOMC's tools, systems, structures, and processes have been established to a relatively high standard or quality, but technical and financial autonomy still present problems. The main areas of under-performance are (1) human capacity for M&E and data demand and use with routine monitoring and (2) borderline or average national and subnational databases. Many areas received high scores for quality, with the exception of human capacity for M&E and data demand and use. Following is a summary list of the main findings of the assessment:

- DOMC has a national policy with clear goals and objectives. Activities are aligned with these goals and objectives, including M&E.

- NMS has governance structures with clear terms of references; the highest decision-making body is the Malaria Interagency Coordinating Committee (MICC).
- DOMC has an M&E unit that is adequately staffed and equipped with requisite hardware, data capture tools, and software to enable data compilation, analysis, and storage in an M&E database.
- A national M&E plan monitors and evaluates progress toward the overall vision of a Malaria-Free Kenya; the plan is elaborate and cited as an example of a document well done and worth emulating by other national public health programs.
- Even though DOMC has good capacity for routine monitoring and evaluation, technical support from partners has been necessary to deliver the DOMC M&E mandate.
- The annual workplan M&E activities are costed and have clear timelines and sources of funding, but they are not linked to the government Medium-term Expenditure Framework (MTEF).
- DOMC has a comprehensive communication strategy and active coordination mechanism for program advocacy, communication, and social mobilization.
- DOMC relies heavily on national systems, such as the Health Information System (HIS), which largely reports on service delivery statistics and morbidity with some malaria commodity information; this implies that HIS deficits in data quality and timeliness are also true for malaria data.
- Processes and standard operating procedures exist for most routine activities, such as data collection, collation, and dissemination.
- DOMC has an inventory of institutions that conduct malaria research, and the national research agenda and key partners are represented in the Operations Research Technical Working Group (TWG).
- Comprehensive, national data use plans or data analysis and presentation guides are lacking.

RECOMMENDATIONS

The following paragraphs summarize problems by specific areas.

Planning, coordination, leadership, and management

- In an era of devolution with a lot of uncertainty, DOMC needs to revisit its governance structures and partnerships built over the years with the Roll Back Malaria Partnership model, re-invigorate these partnerships, and align with the new constitutional dispensation and the changing mandate of DOMC. A good starting point for such an exercise would be a detailed partners database at the national and subnational levels with key data elements, such as partner activity, key contacts, locations, and a network analysis of how partner activities can be used for malaria control.
- DOMC and partners should dedicate resources to institutionalize organizational development processes started in 2009, such as staff retreats and the organizational transformation process, induction of new staff into the vision and mission of DOMC, and targeted leadership and management capacity building for sustained results.

Increased confidence in routine health information systems and improvements in routine monitoring

- Considering the heavy investments in routine health information systems overall, of which DOMC has been a big beneficiary, DOMC should continue to advocate and champion for one

National Health Information System (NHIS) as a sustainable solution to required information for routine program M&E.

- Despite improvements in data quality, the issues identified in certain malaria indicators, such as IPTp, laboratory data, mortality data, and commodity tracking, need urgent concerted efforts to sustain the confidence in routine health information systems. DOMC should reach out to concerned stakeholders to remove bottlenecks identified with other agencies in the health sector.
- A major gap in DOMC routine program monitoring is the link between programmatic and financial elements. DOMC needs to formulate clear guidelines for budget monitoring, such as customized dashboards, including all key data elements (request dates, amount, disbursement date, activity, expenditure, and surrender) to tie them to programmatic targets and timelines.

Data demand and use

- A more structured approach to DOMC evidence-based decision making requires revision of relevant technical documents, such as the national M&E plan; development of new technical guidelines, such as for data demand and use; and capacity building for competencies in data analysis, presentation, and use.
- DOMC needs to revisit the malaria information acquisition system as a possible platform for knowledge management. Huge investments have gone into the Malaria Information Acquisition System (MIAS), and a strategy for revitalizing it is required.
- DOMC should update the inventory of institutions that conduct malaria research and evaluations, including specific research activities undertaken, so that data can be used for evidence-based decision making.
- The first Kenya National Malaria Forum is praised consistently as an excellent avenue to promote a culture of information sharing, learning, and inquiry. As such, DOMC and partners should proceed to plan and execute the next Kenya National Malaria Forum to help malaria researchers, policymakers, and programmers exchange ideas.

Sustaining capacity building in the context of devolution

- To sustain capacity for M&E on national and subnational levels, DOMC and its partners need to advocate for NMS M&E budget targets and mobilize resources to meet those targets through existing channels, such as the Resource Mobilization Technical Working Group, linking DOMC M&E resource needs with the MTEF process and other channels as appropriate. Key technical documents that will guide the process will be costed human capacity building plans for DOMC, training databases and strategies that list training needs, existing capacity of trained staff, and a validated, multi-stakeholder malaria M&E curriculum that can be used at all levels of the health care system.
- DOMC should share resources at the subnational levels in time for their planning processes, and then review the subnational level plans and incorporate them into larger national plans, which, in turn, need to be incorporated in the MTEF, Annual Work Plan (AWP) and Malaria Business Plan (MBP).

CHAPTER 1: INTRODUCTION

1.1 BACKGROUND AND CONTEXT

The findings in this report are from an assessment undertaken to understand and document the capacity of the Division of Malaria Control (DOMC) to perform its monitoring and evaluation (M&E) functions as part of wider efforts to improve the Ministry of Health M&E systems in Kenya. The assessment was done in collaboration with the MEASURE Evaluation PIMA project. PIMA's emphasis is on developing and institutionalizing approaches and tools to identify information needs and plan for and use data for decision making. This is especially important as the National Health Information System (NHIS) continues to be improved and rolled-out nationally (1,2) and program-level M&E staff continue to undertake systematic collection and use of information to manage programs and guide strategies and policies (3).

1.2 THE DIVISION OF MALARIA CONTROL

1.2.1 *Policy Context*

DOMC is one of several national public health programs under the Department of Disease Prevention and Control of the Ministry of Health. In 2009, DOMC underwent a National Program Review (NPR) (4). Until then, the National Malaria Strategy (NMS) 2001–2010 was in operation (5), and DOMC decided that it was time for the country to take stock of its achievements under this plan.

DOMC undertook a broad-based consultative process that involved various stakeholders in malaria control, and thematic groups formed to spearhead the process. The deliberations were anchored in the Government of Kenya's mid-term plan for the health sector, the Second National Health Sector Strategic Plan (NHSSP II), Kenya Vision 2030, Millennium Development Goals, and the Roll Back Malaria Partnership goals and targets for malaria control.

The product of these deliberations was a new National Malaria Strategic Plan 2009–2017 (6), with the overriding goal of a Malaria-Free Kenya and the following strategic objectives:

- **Objective 1:** By 2013, to have at least 80% of people living in malaria risk areas using appropriate malaria preventive interventions.
- **Objective 2:** To have 100% of fever cases that present to a health worker access prompt and effective diagnosis and treatment by 2013.
- **Objective 3:** To ensure that all malaria epidemic prone districts have the capacity to detect and the preparedness to respond to malaria epidemics annually.
- **Objective 4:** To strengthen surveillance, monitoring, and evaluation systems so that key malaria indicators are routinely monitored and evaluated in all at-risk malaria districts by 2011.
- **Objective 5:** To strengthen advocacy, communication, and social mobilization capacities for malaria control to ensure that at least 80% of people in areas at risk of malaria have knowledge on prevention and treatment of malaria by 2014.

The NMS 2009–2017 states that a multisector approach is required to achieve these objectives, together with decentralization of services to the districts and provinces, in line with NHSSP II (7). Further, the expectation was that programmatic decisions would be evidence-based, which

requires a robust M&E system, and that interventions would be in line with the changing malaria epidemiology in Kenya.

1.2.2 Monitoring and Evaluation

The importance of M&E is recognized as a strategic objective in the Kenya NMS 2009–2017, with one objective focused on strengthening surveillance of monitoring and evaluation systems to routinely monitor and evaluate malaria indicators (5). In addition, a costed national M&E plan was developed in tandem with the NPR, and in line with the international practice of the *three ones*: one national strategy, one national coordinating body, and one national M&E system (8).

The Surveillance, Monitoring, and Evaluation and Operational Research Unit is mandated to coordinate the generation of information and data on the progress of implementations of malaria interventions and evaluate health impacts of interventions (8). Notable strengths of DOMC's M&E system include an M&E plan that is linked to the national strategy with specific, measurable, accurate, reliable, and timely (SMART) goals, objectives, and indicators with appropriate data sources, a functional management unit that is experienced in collecting and analyzing data and production of reports, as well as standardized data collection tools with clear instructions to report on activities and commodities (9).

In addition, the M&E unit is equipped with the requisite hardware and software to enable data compilation, analysis, and storage in an M&E database. The unit benefits from advice and technical guidance from a technical working group drawn from stakeholders with interest in M&E (government, academia, research institutions, nongovernment organizations [NGO], and development partners) and the current President's Malaria Initiative support, which seeks to increase capacity and ability to analyze routine data and conduct on-going program monitoring for specific interventions.

The M&E unit is primarily expected to track the service delivery indicators for strategic malaria control interventions. In addition, the M&E Plan identifies the following essential performance statements:

1. Ability to collect, collate, process, analyze, and use appropriate malaria data at all levels of malaria control
2. Ability to regularly monitor and document program performance based on implementation plans and targets
3. Ability to facilitate harmonization of malaria data collection based on standardized definitions, tools, and indicators
4. Ability to update malaria databases for comprehensive storage and retrieval and use of malaria control information
5. Ability to coordinate and strengthen linkages with other programs and partners who generate malaria data
6. Ability to provide accurate and timely information to the malaria program and all stakeholders for evidence-based decision making at all levels

Overall, DOMC's performance is measured against NMS achievements of targets, outputs for the business plan, and achievements of the sector's annual operational plan (4).

1.2.3 Challenges to Meeting Performance Objectives

DOMC's ability to undertake its M&E responsibilities is hampered by several challenges. These include data reporting through the Health Management Information System, and lack of information and clarity on tracking malaria commodities at the lower levels, such as district health facilities. A recent audit report by the Global Fund pinpointed challenges that relate to the ability of health facilities to report in a timely manner and forward complete reports (10).

In addition, the 2009 Malaria Program Review concluded that DOMC had a weak coordinating capacity at the provincial and district levels, which affects delivery of malaria control interventions and the capacity for monitoring and evaluation (4). Other major challenges include inadequate routine monitoring of training quality and services, absence of procedures for data quality assurance or plan for data management, late reporting and weak systems for data and commodity verification (9), and lack of goodwill in using the Malaria Information Acquisition System (MIAS) for efficient data capture and reporting (11). Overall, the challenges relating to quality and timeliness have been identified as affecting the ability of health programs to undertake their M&E functions.

1.3 ASSESSMENT OBJECTIVES

The overall objective of the baseline assessment was to understand current capacity in M&E performance objectives and gaps to determine the most appropriate interventions for DOMC and to monitor and evaluate success in strengthening DOMC M&E capacity.

The assessment had the following specific objectives:

1. Understand, document, and clarify performance objectives for program-level M&E
2. Determine the current status of performance in key DOMC M&E functional areas
3. Identify gaps in DOMC's capacity to meet performance objectives.

CHAPTER 2: METHODOLOGY

The DOMC baseline assessment used a cross-sectional observational study design with a mixed-methods approach. The assessment collected quantitative and qualitative data using customized tools at the group and individual levels, document reviews, and key informant interviews (KII).

2.1 STUDY POPULATIONS

The assessment focused on DOMC as an organizational unit at the national level and with its stakeholders. Primary data were collected among key DOMC staff, including the national program manager, M&E personnel, thematic focal points, and selected malaria stakeholders that provide technical assistance to DOMC.

2.2 SAMPLING

MEASURE Evaluation identified participants through a purposive sampling strategy in consultation with DOMC. The approach made it possible to interview only those people who are knowledgeable on program M&E responsibilities and specific individuals tasked with implementing M&E functions in DOMC. It also provided an overall context for M&E from non-M&E respondents.

2.3 PROCEDURES

The assessment used a mixed methods approach to collect data for this assessment, including secondary data collection (desk review of existing documentation) and primary data collection using KIIs and group and individual assessment tools.

A detailed desk review, designed to bring out important gaps in existing documentation, surveyed relevant documents and literature on DOMC M&E capacity, focused mainly on the following areas:

- History and structure of the institution and M&E activities
- Current status of the institution and M&E activities
- Existing documentation on M&E capacity
- Existing documentation about gaps in M&E capacity

The desk review helped guide the assessment.

MEASURE Evaluation developed a generic data collection tool that captures various dimensions of capacity—organizational, technical, and behavioral—to provide an overall approach to data collection during the assessment. This tool was developed similar to several tools used internationally for M&E capacity assessment:

1. Global Fund Monitoring and Evaluation System Strengthening Tool (MESST) (12)
2. United Nations Joint Program on HIV/AIDs (UNAIDS) 12 components tool (13)
3. MEASURE Evaluation's PRISM framework, which looks at organizational, behavioral, and technical aspects to assess routine health information systems (14)
4. MEASURE Evaluation's individual competency assessment tool, SCORE-ME (15)

The tool was customized into an Excel-based group assessment tool with customized dashboards. Table 1 shows the main components or capacity areas evaluated and the areas each component

covered. For each capacity area, a number of capacity elements were evaluated through a series of questions with the following dimensions:

1. *Status*: if a given element exists, such as a national M&E plan
2. *Quality*: if the element conforms to established quality norms
3. *Technical autonomy*: the extent to which a program can develop and execute the element on its own
4. *Financial autonomy*: the extent to which a program can develop and execute the element using its own resources.

Table 1: Capacity Areas Assessed by the Group Assessment Tool and the Main Areas of Focus

	Capacity Area	Main Focus of Questions
1	Organizational	<ul style="list-style-type: none"> • Leadership: Effective leadership for M&E in the organization • Human Resources: Job descriptions for M&E staff; adequate number of skilled M&E staff; defined career path in M&E • Organizational Culture: National commitment to ensure M&E system performance • Organizational Roles and Functions: Well-defined organizational structure, including a national M&E unit; M&E units or M&E focal points in other public, private, and civil society organizations; written mandates for planning, coordinating, and managing the M&E system; well-defined M&E roles and responsibilities for key individuals and organizations at all levels • Organizational Mechanisms: Routine mechanisms for M&E planning and management, for stakeholder coordination and consensus building, and for monitoring the performance of the M&E system; incentives for M&E system performance • Organizational Performance: The organization achieves its annual workplan objectives for M&E
2	Human Capacity for M&E	<ul style="list-style-type: none"> • Defined skill set for individuals at national, subnational, and service-delivery levels • Workforce development plan, including career paths for M&E • Costed human-capacity building plan • Standard curricula for organizational and technical capacity building • Local or regional training capacity, including links to training institutions • Supervision, in-service training, and mentoring
3	Partnership and Governance	<ul style="list-style-type: none"> • National M&E Technical Working Group • Mechanism to coordinate all stakeholders • Local leadership and capacity for stakeholder coordination • Routine communication channel to facilitate exchange of information among stakeholders
4	National M&E Plan	<ul style="list-style-type: none"> • Broad-based participation in developing the national M&E plan • Explicitly linked to the National Strategic Plan • M&E plan adheres to international and national technical standards • M&E system assessments and recommendations for system strengthening are addressed in the M&E plan
5	Annual M&E Costed Workplan	<ul style="list-style-type: none"> • M&E workplan contains activities, responsible implementers, timeframe, activity costs, and identified funding • M&E workplan explicitly links to the workplans and government MTEF budgets • Resources (human, physical, financial) are committed to implement the M&E workplan • All relevant stakeholders endorsed the national M&E workplan • M&E workplan is updated annually based on performance monitoring

	Capacity Area	Main Focus of Questions
6	Advocacy, Communication, Culture and Behavior	<ul style="list-style-type: none"> • Communication strategy includes a specific M&E communication and advocacy plan • M&E is explicitly referenced in national policies and the National Strategic Plan • M&E champions among high-level officials are identified and actively endorsing M&E actions • M&E advocacy activities are implemented according to the M&E advocacy plan • M&E materials that target different audiences and support data sharing and use are available
7	Routine Monitoring	<ul style="list-style-type: none"> • Data collection strategy is explicitly linked to data use • Clearly defined data collection, transfer, and reporting mechanisms, including collaboration and coordination among the different stakeholders • Essential tools and equipment for data management (e.g., collection, transfer, storage, analysis) are available • Routine procedures for data transfer from subnational to national levels
8	Surveys and Surveillance	<ul style="list-style-type: none"> • Protocols for all surveys and surveillance based on international standards • Specified schedule for data collection linked to stakeholders' needs, including identification of resources for implementation • Inventory of surveys conducted • Well-functioning surveillance system
9	National and Subnational Databases	<ul style="list-style-type: none"> • Databases designed to respond to the decision-making and reporting needs of different stakeholders • Linkages between different relevant databases to ensure data consistency and avoid duplication of effort • Well-defined and managed national database to capture, verify, analyze, and present program monitoring data from all levels and sectors
10	Supervision and Auditing	<ul style="list-style-type: none"> • Guidelines for supervising routine data collection at facility- and community-based levels • Routine supervision visits, including data assessments and feedback to local staff • Periodic data quality audits • Supervision reports and audit reports
11	Evaluation and Research	<ul style="list-style-type: none"> • Inventory of completed and ongoing country-specific evaluation and research studies • Inventory of local evaluation and research capacity, including major research institutions and their focus of work • National evaluation and research agenda • Guidance on evaluation and research standards and appropriate methods • National conference or forum for dissemination and discussion of research and evaluation findings
12	Data Demand and Use	<ul style="list-style-type: none"> • The program's national strategic plan and the national M&E plan include a data use plan • Analysis of program data needs and data users • Data use calendar to guide the timetable for major data collection efforts and reporting requirements • Evidence of information use (e.g., data referenced in funding proposals and planning documents)

An individual assessment tool was also developed using the UNAIDS guidelines for M&E competencies for M&E personnel (16). These competencies include M&E leadership, data collection and management, evaluation competencies, data analysis dissemination and use, and general management competencies. The questions under each key competency were programmed into an Excel-based self-assessment tool.

Both the group and individual assessment tools were administered during a workshop held June 17–20, 2013. The group assessment tool was facilitated by skilled M&E practitioners from MEASURE Evaluation through a consensus-building methodology. The facilitator read the question and asked participants to discuss and arrive at an answer. Only the final answer derived through this consultative process was recorded as the final score.

The individual assessment tool was explained to all participants in the workshop through a dedicated introductory session; thereafter, the tool was e-mailed to each participant to fill out. A facilitator carefully went through participants' answers and archived a final version for data analysis and presentation.

MEASURE Evaluation also developed two interview guides for KIIs with DOMC staff and stakeholders. These KIIs were administered after the workshop by MEASURE Evaluation staff to provide context for the observations arising from the group and individual assessments. Each KII took approximately an hour to complete.

Table 2 summarizes the methods, targets, and data collection tools used to meet the capacity assessment objectives.

Table 2: Summary of Methods, Targets, and Data Collection Tools Used to Meet Assessment Objectives

	Objective	Methodology	Position of Interest	Tool
1	Understand and confirm the performance objectives of the DOMC M&E unit	Desk review	NA	• Desk review guide
		In-depth interviews	Senior program staff (n= 1)	• KII guide for DOMC
		In-depth Interviews	M&E unit staff (n= 3)	• KII guide for DOMC
2	Determine the current status of performance in key M&E functional areas for DOMC	Desk review	NA	• Desk review guide
		Group self-assessment	M&E (n=6) and program unit staff (n= 3)	• Group assessment tool • KII guide for DOMC
		In-depth interviews	Senior program staff (n= 1)	• KII guide for DOMC
		In-depth interviews	Stakeholders (n=2)	• KII guide for stakeholders
3	Identify gaps in DOMC's capacity to meet performance expectations	In-depth interviews	Senior program staff (n=1)	• KII guide for DOMC
		Individual self-assessment	M&E unit and program staff (n= 9)	• Individual assessment tool

2.4 DATA MANAGEMENT

2.4.1 Data Storage

MEASURE Evaluation developed group and individual assessment tools in Excel to enter and store quantitative data. Datasets were made accessible to only authorized study investigators and trained data management personnel. Completed KIIs and other data collection matrices, such as desk review guides, were stored in a secure cabinet with access limited to authorized personnel in the assessment. Only data summaries were shared with DOMC at the workshop for the quantitative data. Completed KIIs have not been shared except with the analytical team.

2.4.2 Data Analysis

MEASURE Evaluation analyzed quantitative data in the group and individual assessment tools using simple scoring for each question and overall scores for each competency or component displayed in easy-to-interpret dashboards. Scoring was based on group consensus for the group tool and perceived score for the individual tool.

Questions in the group assessment tool had a variety of possible responses, from simple yes/no to a five-point scale, such as weekly, monthly, quarterly, biannually, and annually. Because of this variation in response categories, scores were scaled-up to a scale ranging from 0 to 10 for easy display in the dashboards and spider plots. Further, because the number of individuals doing the individual assessment was relatively small, overall competencies scores were displayed as box and whisker plots, with the median as a measure of central tendency. Simple descriptive statistics (e.g., means, frequencies) were used where appropriate.

Qualitative answers were analyzed using a thematic approach. The themes were predefined on the basis of literature and followed closely the 12 capacity areas of interest for the assessment. Both the audio recorded interviews and the notes from the interviews were transcribed in MS Word 2007 and analyzed using thematic analysis charts that presented key themes and issues that emerged from the interviews. These later were corroborated with other data sources to guide the description of M&E capacity at DOMC. Each transcript received a unique identifier with the date and participant identifier to provide confidentiality and anonymity.

2.5 ETHICAL CONSIDERATION

Ethical approval for this assessment was granted by the Kenya Medical Research Institute's Ethical Review Committee. The voluntary nature of the assessment was clearly explained to all participants and they were told that there was no obligation to respond to any of the questions during assessments and administration of the various tools. Before each interview and the administration of other tools, participants had an opportunity to query the aim, objectives, and benefits of the assessment. They were asked to sign an informed consent sheet, when appropriate.

To ensure the safety of the documents used in this study, all original documentation was kept in a secured location at ICF International offices. The documentation was available only to the study team concerned with the assessment. For protection of research participants' confidentiality, data collected were kept anonymous by ensuring that participant names were not recorded; participant codes were used instead. All participants were told they could voluntarily withdraw from the assessment at any time without consequences or implication on their careers.

CHAPTER 3: RESULTS

This section draws on the results from the group assessment tool, individual assessment tool, and key informant interviews. First we describe the overall snapshot of various capacity areas, followed by an in-depth discussion of each capacity area.

3.1 RESULTS

The overall DOMC M&E picture of capacity across the 12 capacity areas and by the various dimensions of interest—status, quality, and two measures of sustainability (technical and financial autonomy)—are shown in Figures 1–4. From the figures, it is apparent that many of the tools, systems, structures, and processes have been established, to a relatively high standard or quality; however, technical and financial autonomy are problems.

For status, the main areas of under-performance are human capacity for M&E and data demand and use; routine monitoring and national and subnational databases are borderline or average. High scores were achieved for the quality dimension for many of the areas, except human capacity for M&E and data demand and use.

Technical and financial autonomy are average or below average in many capacity areas. A more in-depth description of these problem areas appear in the capacity areas in Section 3.2.

Figure 1: Status of Various Capacity Areas at DOMC

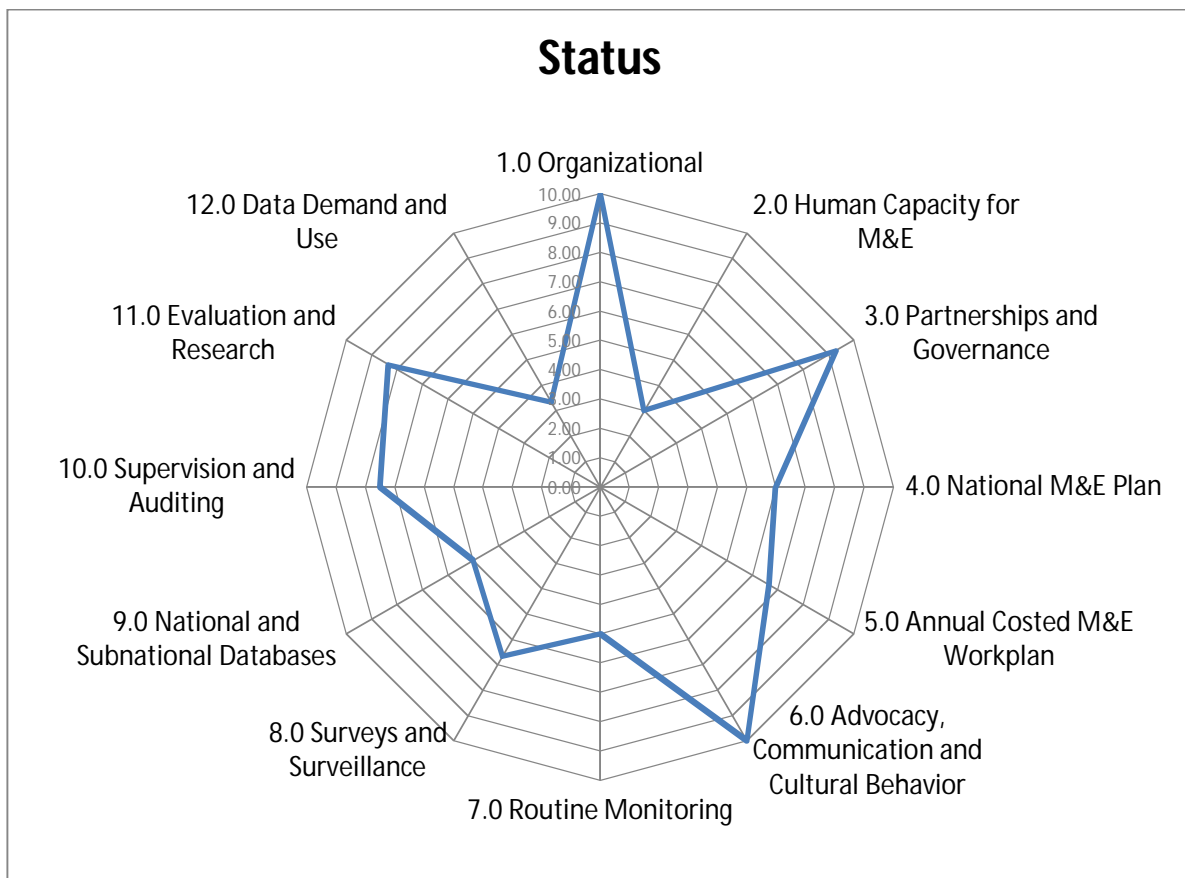


Figure 2: Quality of Various Capacity Areas at DOMC



Figure 3: Technical Autonomy for Various Capacity Areas at DOMC

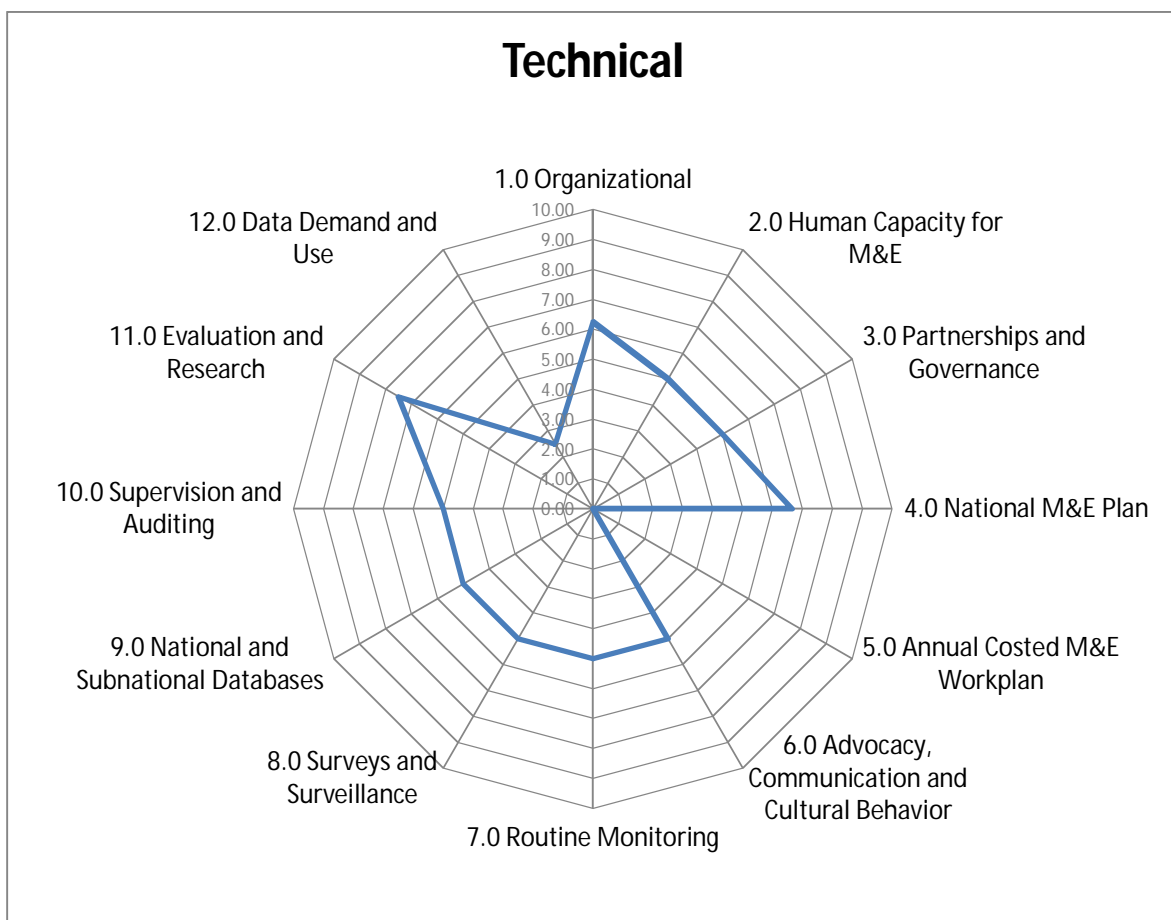
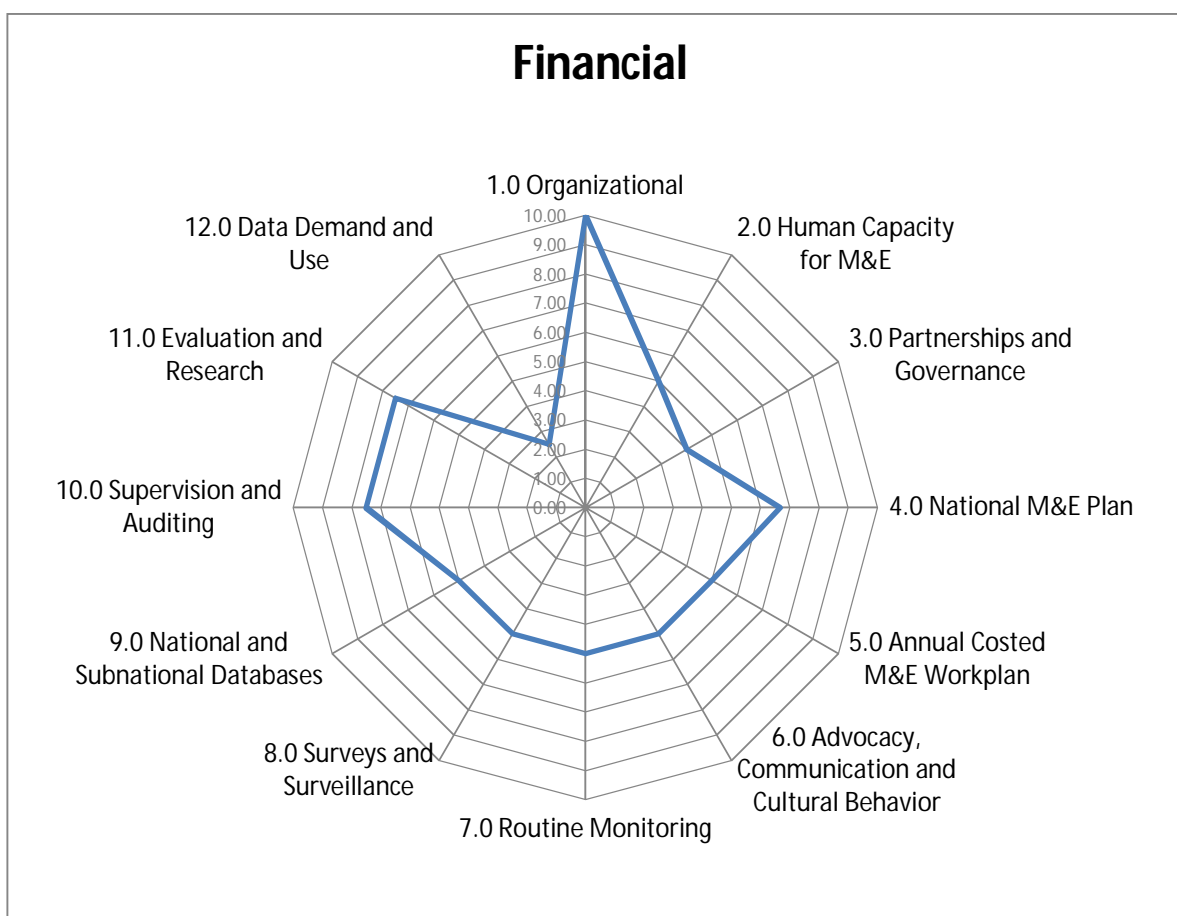


Figure 4: Financial Autonomy with Regard to Various Capacity Areas at the DOMC



3.2 ISSUES ARISING UNDER EACH CAPACITY AREA

3.2.1 Capacity Area 1: Organizational

DOMC has undergone at least two strategic planning processes, 2001 and 2009, which are the basis for two national malaria strategic plans with the requisite governance structures. DOMC is currently going through a mini program review intended to feed into a bigger Global Fund proposal writing process and a mid-term review of the current strategic plan, the National Malaria Strategy 2009–2017. The context for malaria control has changed drastically in the advent of devolution, and the national strategy likely will change substantially beginning the last quarter of calendar year 2013.

DOMC has a clear vision of a Malaria-Free Kenya by 2017, and the mission and strategic objectives are aligned with this overall vision. The vision and mission statement and the DMC values are largely known to staff. They are displayed prominently throughout DOMC as pin-ups on notice boards, roll-up banners, and in strategic and technical documents.

“We have had retreats and during these meetings we talk about the core values. We go through Stephen Covey’s seven habits and we reflect on the values of the division. The staffs have really tried with the core values; they meet the targets, finish their work and do it effectively. We know our mission and mandate and align our

activities to the vision mandate. The support staff also knows the mission and core values." (DOMC Informant K003)

In addition, DOMC has a service charter (17) that holds all of the division to account in realizing the vision and mission. The service charter covers the team purpose, values, diversity, and service and has corresponding value statements, commitments, and accountability statements for each area (Table 3).

Table 3: The Division of Malaria Control—Team Charter

Area of Agreement	Value Statement(s)	Commitment/Observance	Accountability
Team Purpose	DOMC Mission: To direct and coordinate efforts toward a Malaria-Free Kenya Vision: A concerted effort toward a Malaria free Kenya	The team will be committed in directing and coordinating efforts toward a Malaria-Free Kenya in a concerted effort.	The team members will call upon each other to put efforts toward achieving a Malaria-Free Kenya. The team members will call upon all stakeholders to coordinate and concert efforts toward a Malaria-Free Kenya.
Team Values	Effectiveness Courtesy Transparency Technical and professional excellence	I will deliver quality services as expected and in time. I will discharge my duties with respect and kindness. I will discharge my duties with openness and without favor. I will endeavor to develop my skills technically and professionally in order to provide quality services.	Other team members are free to call me to account for my effectiveness, courtesy, transparency and technical/professional service delivery.
Team Diversity	Respect and appreciation of each other's strength in diversity	I shall respect and appreciate other team members regardless of their creeds, ages, gender, and culture, and professional and political persuasions.	I will be accountable to the team for any dispute.
Team Support	Equal opportunities to all members to reach optimum performance levels. Participatory decision making. Enhancement of team cohesiveness.	I will undertake to support other team member's growth and also in good and bad times. I will air my views without fear or favor. I will respect each other's opinions.	Every team member will have equal opportunity for growth and be supported at all times. I will support every decision made by the team. The team must protect the opinions of each team member.
Team Service	To offer prompt and quality service to all clients	I will give an appropriate response to all matters directed to me within 48 hours.	The client may hold me accountable for quality and timeliness of the services rendered.

DOMC has clear governance structures. Its highest decision-making body is MICC. Technical discussions and deliberations are cascaded up from various thematic working groups, such as the Advocacy Communication and Social Mobilization TWG, Vector Control TWG, Monitoring and Evaluation TWG, Global Fund TWG, and so on to the MICC. Each of these TWGs has clear terms of reference set out in the national malaria strategy, and relevant stakeholders have broad-based representation. All TWGs are supposed to meet quarterly and forward final decision points to MICC each quarter.

DOMC has an M&E unit that is adequately staffed (Figure 6). The unit is mandated to coordinate the generation of information on malaria intervention implementation progress, as well as evaluation of health impacts from the implemented interventions. Under previous and current PMI funding

(MSH/Strengthening Pharmaceutical Systems Program), the M&E unit has been equipped with the requisite hardware, data capture tools, and software to enable data compilation, analysis and storage in an M&E database. The unit consists of five staff working to ensure routine monitoring, evaluation, supervision, data auditing for quality, data dissemination, and use. An epidemiologist is being recruited under the Global Fund Round 10 grant to join the M&E team to complement the existing skill set.

Figure 5: History of the DOMC M&E Unit

Although no formal M&E unit existed in 2001, the first Kenya National Malaria Strategy 2001–2010 established an M&E TWG. By 2004, an M&E focal point had been appointed. In 2006, DOMC was reorganized, and an M&E unit was formally established. Under PMI funding through Management Sciences for Health, a full-time M&E technical officer was co-located at DOMC to help primarily with the Global Fund M&E requirements following the national drug policy change in 2006. The main outcome of this technical assistance was the Malaria Information Acquisition System. The unit currently has a public health nurse, a statistician, an epidemiologist, a malaria specialist, a data manager, and a health records information officer.

The head of the M&E unit and other focal points meet weekly with the program manager as part of the senior management meetings. In addition, monthly internal M&E meetings are held with members of the M&E unit. Quarterly M&E TWGs have been held regularly for the last 2 years. Minutes of M&E meetings are circulated within 2 weeks of each meeting and reviewed and endorsed in the next meeting.

M&E roles and responsibilities and performance management are defined in the context of the broader divisional mandate, goals, and objectives, and within performance contracting in the Kenyan civil service, respectively. In a 2010 roles and responsibilities matrix, the following responsibilities are assigned to the head of the M&E unit:

1. Defining malaria control indicators and monitoring NMS successes toward stated targets
2. Coordination of data collection through routine, rapid assessment and surveys by partners and other divisions
3. Coordination of support supervision
4. Coordination of malaria surveillance
5. Co-ordination of Surveillance, Monitoring, Evaluation and Operations Research TWG
6. Establishment and maintenance of malaria database and maintenance of website
7. Compilation of data, analysis, interpretation, and report writing

DOMC officers, including M&E officers, are subject to the Kenyan civil service performance contracting. In each line ministry, the overall accounting officer is the principal secretary from whom performance targets and objectives are cascaded down to every officer in the line ministry through a performance contract (PC).¹ The purpose of the PC is to “define responsibilities and expectations between parties to enable them to achieve mutually agreed results” (18). Performance

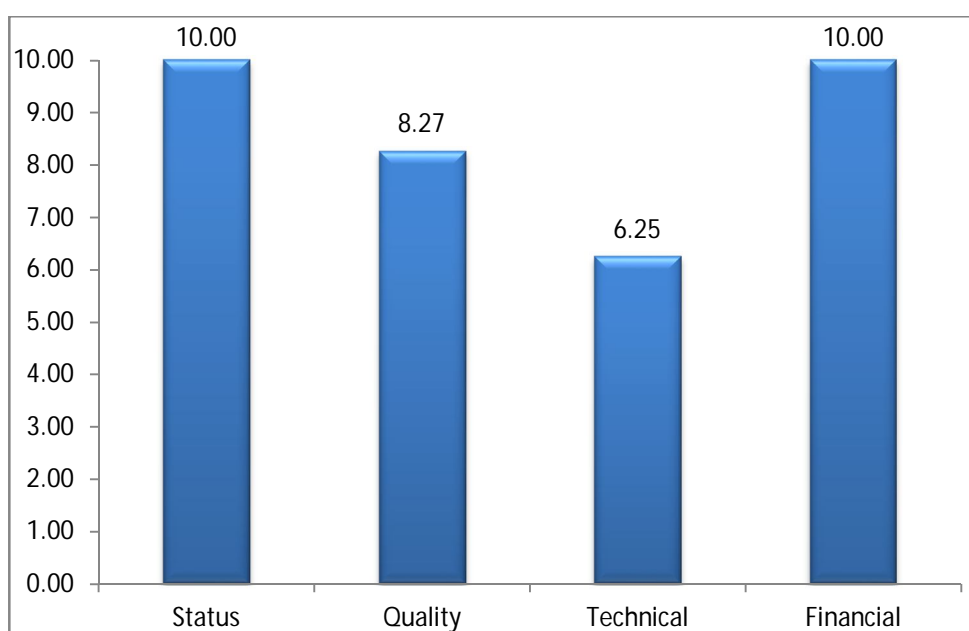
¹The premier Government of Kenya training and capacity building institution, the Kenya School of Government, defines a performance contract as “a freely negotiated performance agreement between Government and the management of a Public Agency. It specifies the intentions, obligations, responsibilities and powers of each party. It organizes and defines tasks so that management can perform them systematically, purposefully and with reasonable probability of achievement.”

appraisals and goal setting are done yearly in this overall structure. Following are the main areas that are cascaded down and for which officers are held accountable:

- Finance and stewardship
- Service delivery
- Non-financial
- Operations
- Dynamic/qualitative aspects
- Corruption eradication

No formal incentives are awarded for good performance at the national level, although at the subnational level, awards have been given to well performing malaria control coordinators.

Figure 6: Summary of Organizational Capacity for M&E in Four Dimensions

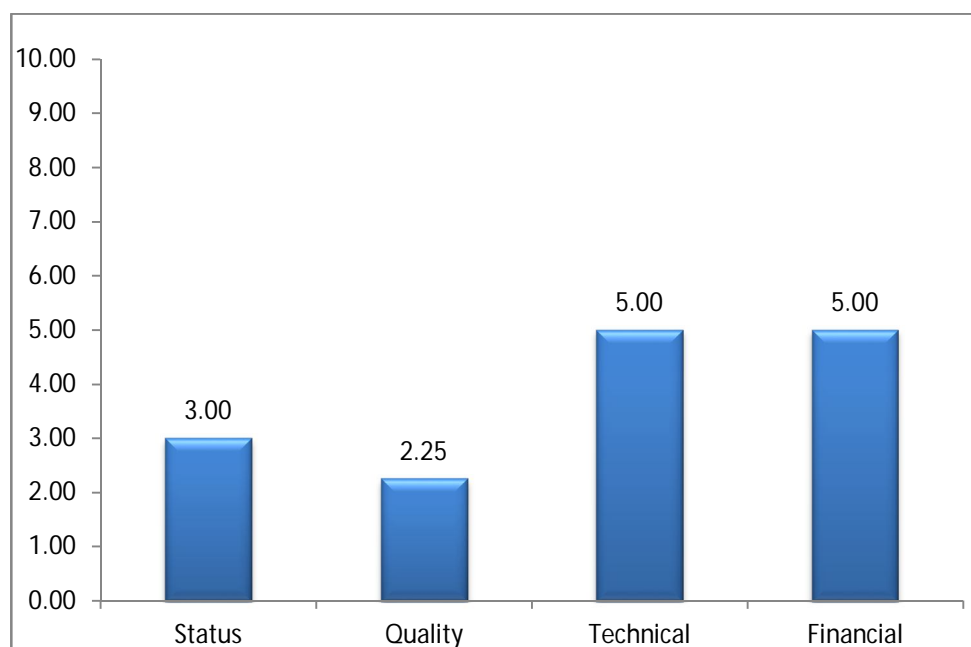


3.2.2 Capacity Area 2: Human Capacity for M&E

Human capacity for M&E was looked at through two levels: at the organizational level, where the entire team was asked to rate DOMC overall, and at the individual level, through individual assessments.

Figure 7 shows the overall score for this capacity area across staff M&E skills and competencies and the existence of four key guidance documents: (1) a costed human capacity building plan (2) a costed human capacity building plan for organizational development, (3) a costed human capacity building plan for data demand and use, and (4) a validated M&E curriculum.

Figure 7: Human Capacity for M&E across Four Dimensions



The main areas of poor scoring were in the lack of costed plans for human capacity overall, organizational development, and data demand and use. In the assessment of the M&E curriculum, DOMC felt that although a high-quality malaria M&E curriculum was developed in 2011, and 54 government officers received training, validation was needed at two levels:

1. To harmonize the existing curriculum with other partner curricula for malaria M&E. For example, the World Health Organization (WHO) has a 6-week course on malaria control that includes an M&E module for mid- to senior-level managers. A curriculum and manual were developed with WHO and African Medical Research Institute support for capacity building for malaria control, including M&E, at the subnational level.
2. For administrative validation or buy-in. This validation can come by having the malaria M&E curriculum signed off at the level of the director of public health or a similar office in the new dispensation.

Competencies in M&E capacity received high overall scores for areas such as having enough mix of staff with the right qualifications to carry out M&E tasks. For example, high scores were awarded for staff ability to use data to make appropriate recommendations for national policy and for staff competency in carrying out routine data quality audits. The exception, with a low score, was staff ability to use geographic information system (GIS) applications to produce simple info graphics. Eleven staff, including at least two M&E officers, were trained on a GIS application, ARC GIS, but these skills have not been used for the most part because of licensing issues of a proprietary product, the right infrastructure for GIS (back-end data for generating various maps), and behavioral issues on the use of GIS overall. Capacity for routine data quality audits is particularly high, with DOMC carrying out at least three malaria-specific data quality assurances (DQA) after the initial sector-wide DQA done in September 2011 with external technical assistance from partners. Routine malaria DQAs are part of the Global Fund Round 10 performance framework.

The individual assessment tool looked at additional M&E competencies, as called for in UNAIDS guidelines (16). Scores were collated for DOMC officers assessed during the June workshop and are

shown in the box and whisker plots in Figure 8. Additional statistical data for the individual assessment are shown in Table 4.

The aggregate individual scores largely corroborate the findings of the organizational tool. Using the 3/5 cut-off agreed at the workshop, many of the competencies, including those rated highly, such as routine data analysis and presentation, were around this 75% cut-off point, with some individuals scoring on the borderline of expert. DOMC has a dearth of evaluation competencies, with this area showing the highest variation. One key informant put it succinctly: “There is a challenge for the larger surveys, we do not have the capacity and have to rely on other partners to do the surveys.” (DOMC Informant K001)

Figure 8: Overall Range and Distribution of Competencies and Skills for M&E Among DOMC Staff (n= 9)

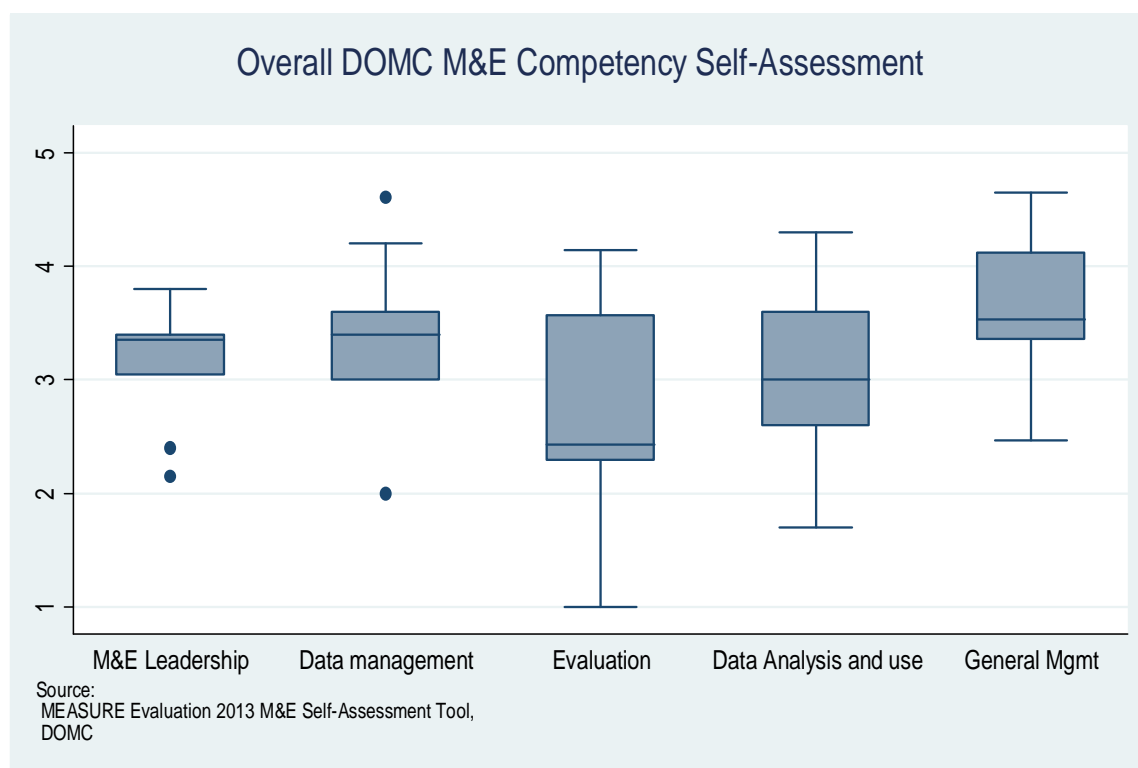


Table 4: Summary Statistics for Pooled Individual M&E Competencies for DOMC Staff (n= 9)

M&E Competency and Skills	Mean	SD	Min	Q1	Median	Q3	Max
M&E Leadership	3.15	0.55	2.15	3.05	3.35	3.40	3.80
Data Collection and Data Management	3.40	0.75	2.00	3.00	3.40	3.60	4.60
Evaluation Competencies	2.73	0.97	1.00	2.29	2.43	3.57	4.14
Data Analysis, Dissemination, and Use Competencies	3.10	0.86	1.70	2.60	3.00	3.60	4.30
General Management Competencies	3.61	0.71	2.47	3.35	3.53	4.12	4.65

3.2.3 Capacity Area 3: Partnerships and Governance

DOMC has a specific strategy or policy to acknowledge and support M&E performance, as stated in the National Malaria M&E Plan 2009–2017, a companion document to NMS 2009–2017. No specific

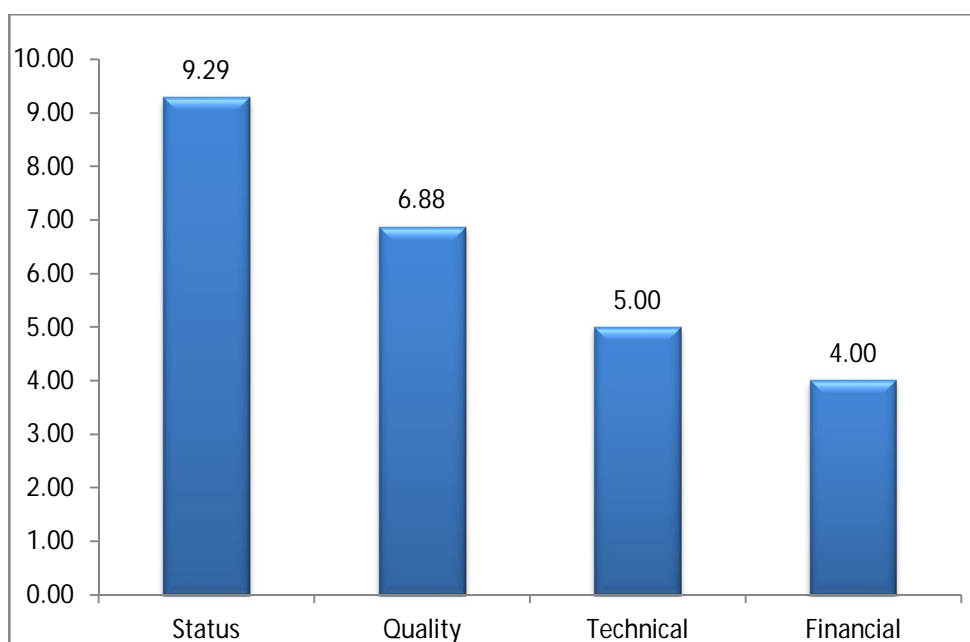
standard operating procedures define roles and responsibilities related to M&E functions and activities, but M&E roles and responsibilities and activities are captured in the roles and responsibilities matrix and document as indicated in Section 3.2.1 and in the NMS 2009–2017 and M&E Plan. Both strategic documents are undergoing review as part of the broader mid-program review.

A national M&E TWG exists as part of the overall DOMC governance mechanisms. The TWG meets regularly and has high buy-in and representation from a broad range of stakeholders, from service provision implementing partners on one end of the spectrum to partners in malaria operations research on the other. The M&E TWG also has internal DOMC representation from thematic areas, such as case management, vector control, and advocacy, communication and social mobilization. DOMC provides strong leadership and coordination for the M&E TWG; the TWG has clear terms of reference and approves key technical documents, provides technical leadership and oversight, and coordinates the M&E system for effective malaria control.

DOMC has an inventory of malaria stakeholders not specific to M&E. This was developed in 2007 as part of the development of the MIAS and was last updated in 2010. DOMC has clear mechanisms, such as feedback reports and newsletters, to communicate M&E activities and decisions to its stakeholders. Key information products from DOMC include quarterly malaria surveillance bulletins, annual malaria report, biannual quality of care survey reports, and technical reports from on-going activities.

Apart from the formal governance structures, DOMC also uses time-limited task forces to execute certain functions. Examples related to M&E include the Kenya Malaria Indicator Survey Task Force and the Post-Long-Lasting Insecticide-Treated Nets (LLIN) Campaign Evaluation Task Force.

Figure 9: Summary of Scores for Partnership and Governance in M&E by Dimension



3.2.4 Capacity Area 4: National M&E Plan

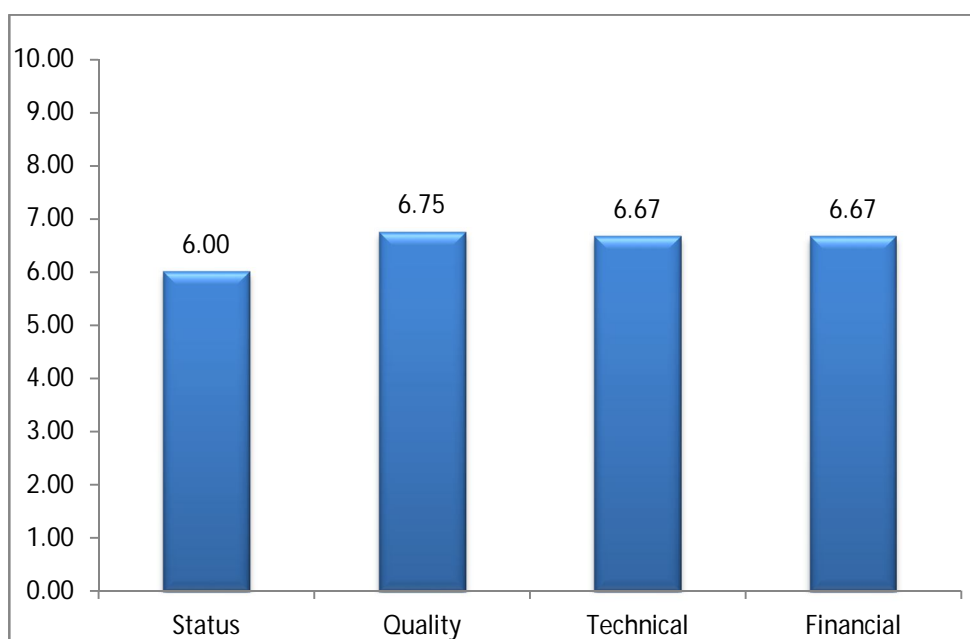
As part of the government institutional requirements, DOMC prepares annual workplans (AWP), previously annual operational plans (AOPs). The Malaria AWP is comprehensive and covers all

program strategic pillars, including M&E activities. The AWP includes both financial and programmatic targets, but not all targets are met. In addition, the financial and budget monitoring component does not include some critical data elements, such as request date, to enable tracking financial requisitions against programmatic activities.

AWPs are prepared by DOMC without external technical support and are shared with partners as part of DOMC's resource mobilization activities and semiannual progress review processes.

Although DOMC does not have formal guidelines that specify when information or reports need to be received and distributed by the division, the spirit and importance of such guidelines are acknowledged and followed in practice. In addition, staff in the M&E unit have relevant skills to carry out the tasks for compilation and processing of information needs of the division.

Figure 10: Summary of Scores for the National M&E Plan by Dimensions



A national M&E plan that monitors and evaluates progress toward the overall vision of a Malaria-Free Kenya exists. The DOMC M&E plan is elaborate and is held up as an example of a document well done and worth emulating by other national public health programs. The M&E plan is in line with the strategic plan for the (former) Ministry of Public Health and Sanitation, medium-term sector strategies and policies, such as the National Health Sector Strategic Plan and Kenya's overall development blueprint, Vision 2030. DOMC appreciates that the M&E plan is a living document, and is cognizant of the need to revise the national malaria M&E plan in line with international best practice and changing needs, following the devolution process.

The global Roll Back Malaria Monitoring and Evaluation Reference Group (MERG) has revised certain indicators for malaria M&E, and during M&E capacity-building activities and routine monitoring, the need was identified to revise some of the indicators in line with global standards and changing program needs and strategies. The discussions from these meetings and this assessment will guide the next generation of indicators for the M&E plan.

Particularly difficult indicators that have been the subject of much discussion are outcome indicators for treatment of fevers; age brackets for some indicators, such as parasite prevalence in

line with the changing malaria epidemiology in Kenya; and indicators for intermittent prevention of malaria in pregnant women (IPTp). These are difficult to measure at the household level because of sample size and cost implications.

3.2.5 Capacity Area 5: Annual Costed M&E Workplan

The AWP M&E activities are costed and have clear timelines and sources of funding. As this assessment shows, the indication is that the costed M&E workplan is not linked to the government MTEF; however, DOMC procurement and office maintenance activities are linked to the MTEF. When gaps in funding M&E activities were identified, the need to link M&E with the MTEF was recognized as a way to raise funds for M&E activities. As required in the national malaria strategy, year-on-year requirements to successfully monitor and evaluate the strategy are in the range of 8–10%, but current funding levels are in the range of 7%, still within the international best practice of 5–10% for M&E activities as a proportion of the overall activity budget (19).

Table 5 shows targets and achievements for fiscal year 2011–2012, for which data were available (20).

Table 5: Surveillance, Monitoring, Evaluation, and Operations Research Indicators and Targets

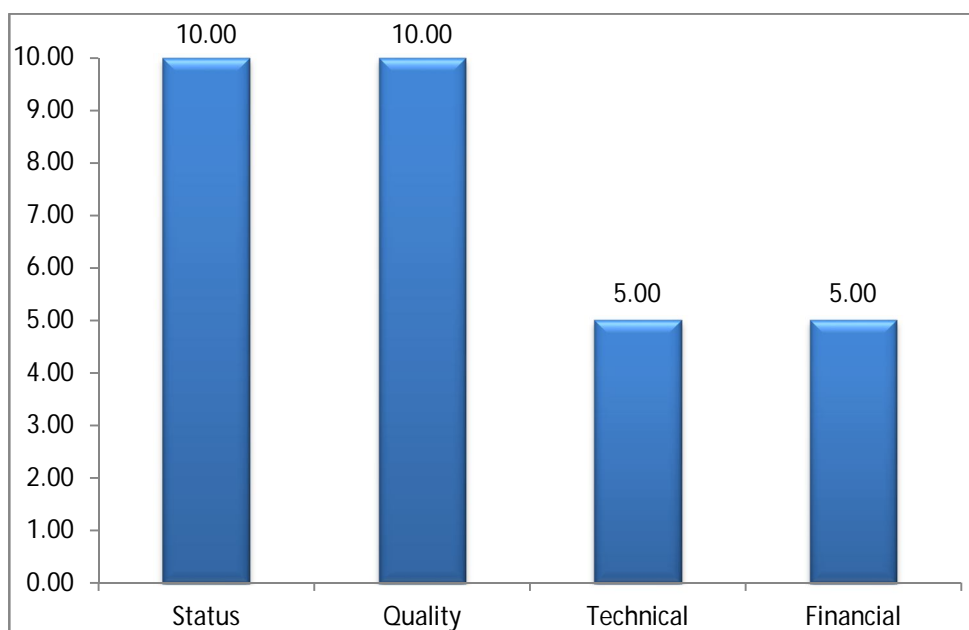
Indicator	Target	Achievement	Comments
Number of surveys for which results have been presented	3	3 (100%)	Quality of care surveys and MIS 2010
Number of DOMC staff trained in surveillance, GIS, and data management	2	1 (50%)	WHO training on malaria surveillance
Number of staff trained in M&E	56	56 (100%)	MEASURE Evaluation training for national, provincial, and district M&E officers
Number of drug efficacy studies completed	1	1 (100%)	Both first-line and second-line treatments evaluated
Number of vector susceptibility studies conducted	1	1 (100%)	Insecticide resistance monitoring
Number of consultative meetings to define research questions	1	1	TWG meeting held
Number of operational research studies conducted	1	1	Alternative insecticides for indoor residual spraying
Annual research to policy conference held	1	1	Held in October 2011

Source: Annual malaria report 2011-2012

3.2.6 Capacity Area 6: Advocacy, Communication, Culture and Behavior

A strong commitment to M&E exists at DOMC at the senior management level and across various thematic areas. Champions have been trained in various aspects of M&E, from basic malaria M&E, GIS, quantitative and qualitative data analysis, and data quality audits. DOMC has a comprehensive communication strategy and an active coordination mechanism for program advocacy, communication, and social mobilization through the ACSM TWG.

Figure 11: Summary of Advocacy, Communication, Culture and Behavior in M&E by Dimension



3.2.7 Capacity Area 7: Routine Monitoring

DOMC relies heavily on national systems, such as HIS, which largely reports on service delivery statistics and morbidity, with some malaria commodity information (e.g., LLINs in antenatal facilities), the Logistics Management Information System (LMIS), which reports on antimalarial commodity consumption, such as artemisinin-based combination therapy (ACT), sulfadoxine-pyrimethamine for IPTp, quinine and amodiaquine, and more recently RDTs. Other systems include the Integrated Disease Surveillance and Response (IDSR), which produces weekly epidemiologic reports for a number of infectious diseases, including malaria and the Laboratory Information Management System (LIMS). A system for adverse drug reaction reporting also exists at the Pharmacy and Poisons Board, although its usefulness has been limited by actionable data for DOMC to make relevant policy decisions.

All systems described earlier have the district as a common nexus. At the district level, HIS, LMIS, and IDSR data collected from peripheral facilities are collated and transmitted to the national level (with provincial summaries also provided in some systems) through the health records information officers, district pharmaceutical facilitators, and district surveillance officers. Under previous administrative structures, DOMC also had a cadre of health workers, district malaria control coordinators, and their provincial counterparts, DMCCs and PMCCs, who coordinated malaria control activities in the district and provincial malaria control partnerships in the public and private sectors. DMCCs and PMCCs were appointed from among DHMTs and provincial health management teams (PHMTs). DMCCs and PMCCs were seen as extensions of DOMC. It is not clear under the new devolved system what will happen to PMCCs and DMCCs.

Because of DOMC's reliance on external data sources, it is difficult to divorce its day-to-day operations from these bigger health systems; therefore, the bigger issues of data quality and timeliness of HIS data are also true for malaria data. With the advent of DHIS-2 and the move toward an integrated National Health Information System, commodity data from LMIS has been linked with service statistics and morbidity data in DHIS-2, but some challenges exist with in-patient data; how data are aggregated, especially from the antenatal care register and MOH 711;

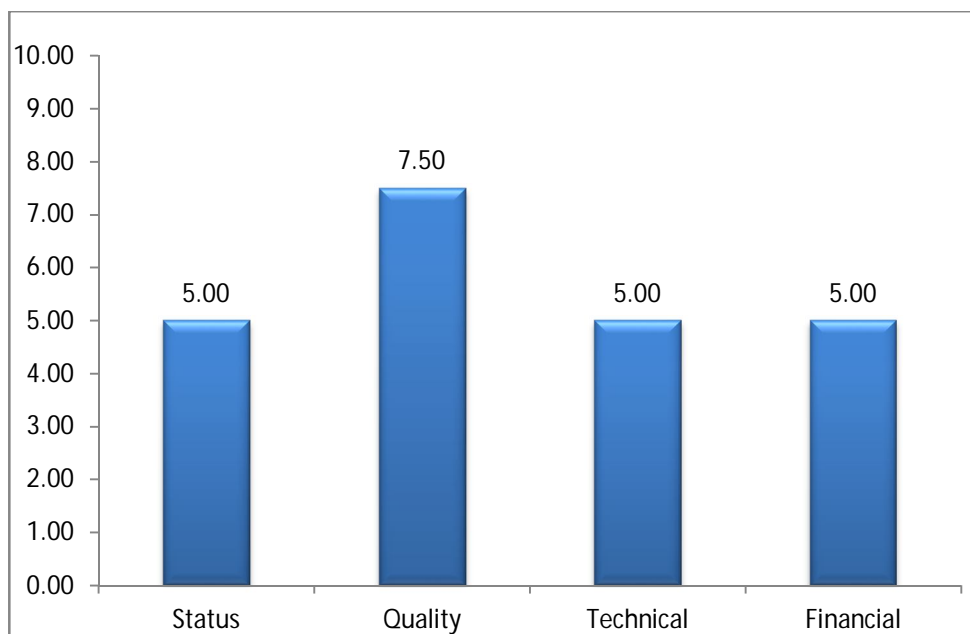
and malaria mortality data. Reporting rates for in-patient data remain low. With partner funding and in fulfillment of Global Fund Round 10 conditions, a short-term measure was instituted to improve reporting for commodities data with some success in the overall grant M&E performance, but the sustainability of such interventions remains to be seen.

National guidelines document procedures for recording, collecting, collating, and reporting program monitoring data from HIS, but these are not unique to the malaria program, they are for the wider health sector. The health sector second-generation indicators manual and standard operating procedures (SOP), which DOMC has adopted, have not been finalized and are awaiting finalization of the community strategy indicators.

A draft set of community strategy indicators was launched in May 2013. These likely will be used to finalize the overall HIS second generation indicator manual and SOPs. DOMC has been represented in the HIS indicator harmonization working group, and its views are incorporated in the overall discussions on current generation indicators.

Targeted capacity building activities are taking place on the use of various tools through the overall strengthening of HIS, data quality audits, during feedback, and on-the-job training sessions for supportive supervision.

Figure 12: Summary of Routine Monitoring for M&E by Dimension



3.2.8 Capacity Area 8: Surveys and Surveillance

A surveys and surveillance inventory exists at DOMC as part of the bigger MIAS, which originally was designed to house data from systems such as HIS, described in Section 3.2.7.

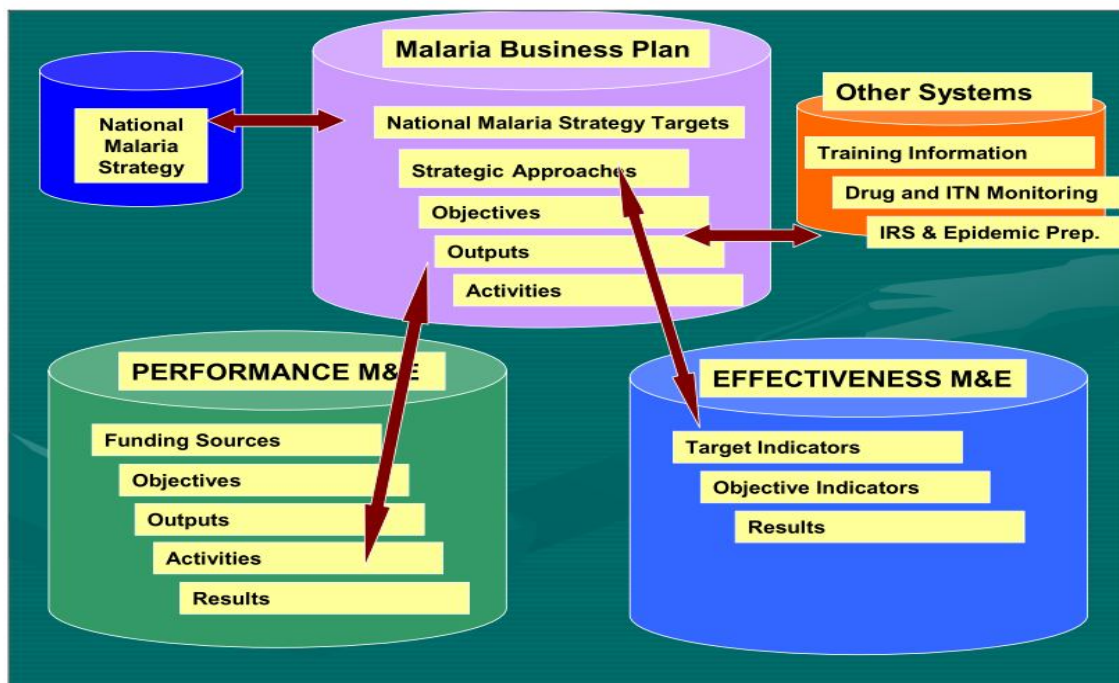
Data from these systems and other *ad hoc* data, such as survey data acquired opportunistically, and business planning data, such as activities, budgets, targets, timelines, trainings, and trip reports, are collated and housed at DOMC using MIAS. Data also are supported by USAID/PMI under MSH/SPS. MIAS has six modules:

1. Planning and budgeting—activity planning based on the annual DOMC business plan
2. Performance and expenditure monitoring
3. Tracking survey results and survey gaps
4. Tracking training information
5. Tracking technical meetings and field and mission trips
6. Hosting various categories of reference data, such as districts, facilities, and malaria partners

An additional surveillance module was added to MIAS in 2011, with support from MEASURE Evaluation, as part of bringing in WHO surveillance guidelines on the need for countries to select key indicators and graphics to monitor and evaluate progress in malaria control into operation. A key output of the surveillance module is the quarterly malaria surveillance bulletin with graphics on morbidity, commodity availability, and reporting rates, with varying degrees of success, depending on data availability.

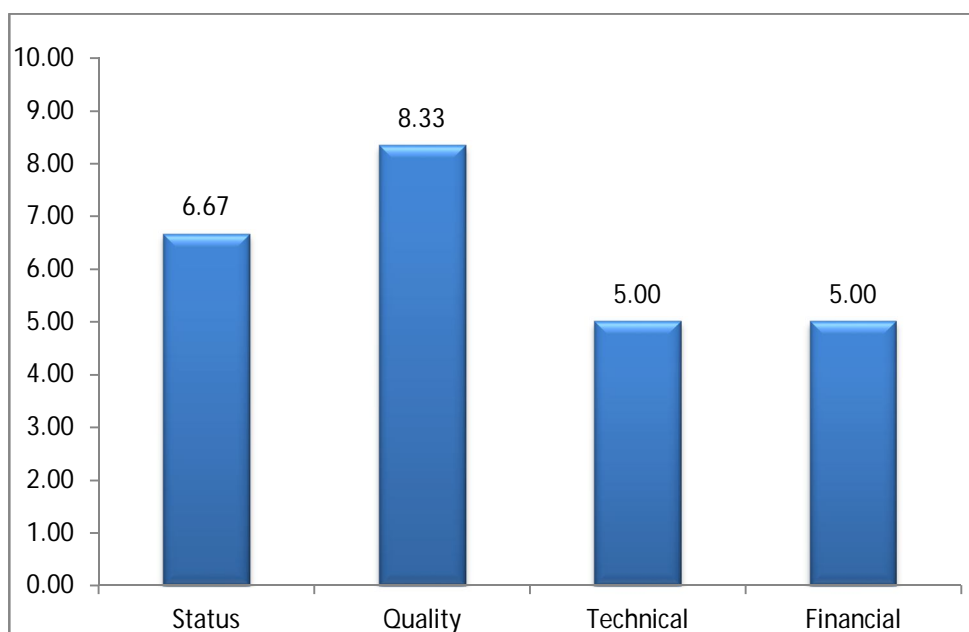
MIAS was identified as a tool to redress DOMC’s need to have an efficient system in place to acquire, process, and store data for ease of access, use, and dissemination. MIAS was also designed as a tool to monitor progress on agreed programmatic activities and targets, as stated in NMS and the annual malaria business plan, the Ministry of Health’s MTEF, and the AOP (11). The system was developed in phases. Phase 1 consisted of development of the concept, basic tools, process, and training of the end-users at DOMC. Phase II consisted of pilots in four selected districts. An electronic data entry tool was developed and loading of routine malaria data from external sources initiated.

Figure 13: Functional Linkages in the MIAS as Originally Designed and Conceived



MIAS, however, as a program monitoring and management tool, has not been effective. It is little used at DOMC. Initiatives are needed to understand the underlying problems of non-use and strategize on how best to revive it: “There is the MIAS, but it is not being used. It was a noble idea and should be used at all cost. But the issues of lethargy among staff made it not work. People thought it was too much work.” (DOMC Informant K007)

Figure 14: Summary of Surveys and Surveillance Scores by Dimension



DOMC has a robust system for the quality assurance of surveys and surveillance activities through two main governance structures, the M&E TWG and an Operations Research TWG. Most protocols pass through these two bodies or other national scientific and ethics review bodies before final approval and implementation.

The DOMC surveillance system is functional, but it relies heavily on HIS and the integrated disease surveillance and response system at the Division of Disease Surveillance and Response. A comprehensive, multi-stakeholder surveillance curriculum was prepared this year, along with a companion national surveillance roll-out plan with MEASURE Evaluation technical assistance.

Technical and financial capacity to independently conduct surveys (see Figure 14) is a key issue, corroborated by KIIs:

“Sometimes we outsource too much, like we need to link people to some surveys so that they can get capacity to do the surveys. The studies should be owned by the DOMC. Routine monitoring HMIS is working well. But all in all, specific studies are being outsourced. So there is need for capacity building.” (DOMC Informant K003)

3.2.9 Capacity Area 9: National and Subnational Databases

As discussed in Sections 3.2.7 and 3.2.8, DOMC has a national database, MIAS, that is linked to other data and information systems for routine program monitoring and evaluation. Table 6 shows some main indicators that DOMC uses, following WHO guidelines for routine program monitoring and evaluation (20).

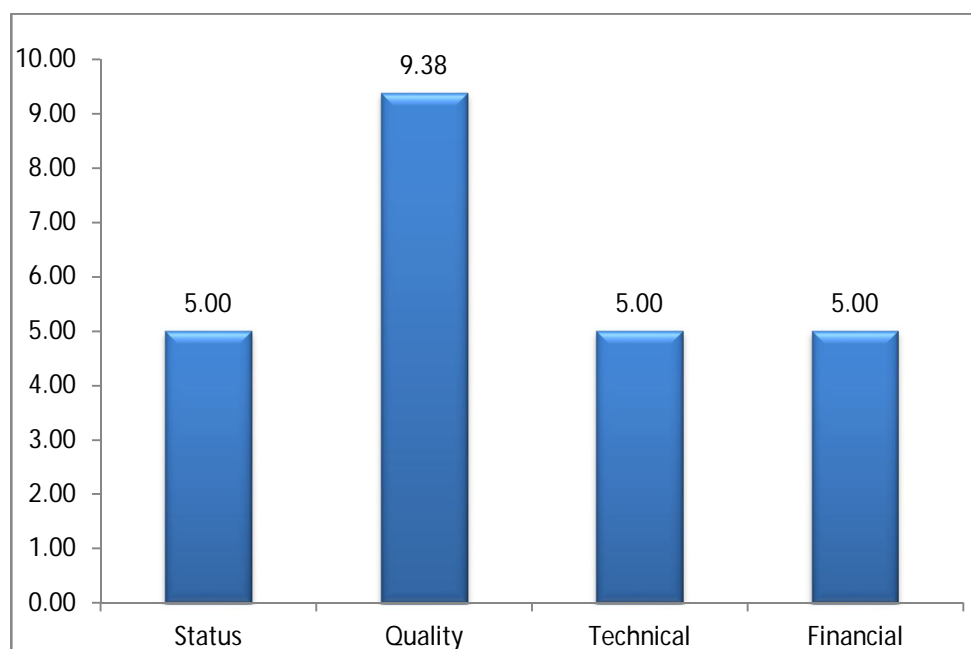
The systems cover most DOMC data needs, but gaps have been identified in the collection and aggregation of certain data. Data include malaria laboratory and in-patient data and how certain indicators are reported or presented in the systems, especially DHIS-2, against the needs of the division.

Table 6: Main Malaria Indicators and Their Sources in HIS

#	Indicator Numerator	Data Sources
1	Total suspected malaria cases	MoH 705A and B
2	Number of malaria cases tested (microscopy)	MoH 505 and MOH 240
3	Number of outpatient confirmed malaria cases (microscopy)	MoH 505 and MOH 240
4	Number of malaria cases tested (RDT)	RDT facility registers, AL register, Lab register
5	Number of outpatient confirmed malaria cases (RDT)	RDT facility registers, AL register, Lab register
6	Total number of outpatient confirmed malaria cases (microscopy, RDT)	MoH 505, MOH 240, and RDT facility registers
7	Total number of confirmed malaria cases treated with ACTs	AL registers
8	Total suspected malaria cases treated with ACTs	AL registers
9	Number of nets distributed for children under age 1 year	CWC register
10	Nets distributed to pregnant women	ITN register MoH 405, ANC register
11	Inpatient malaria cases (confirmed with primary diagnosis of malaria at discharge)	MoH 301 MoH 268 (dist. hosp. or health center)
12	Inpatient malaria cases (confirmed and unconfirmed with primary diagnosis of malaria at discharge)	MoH 301 MoH 268 (dist. hosp. or health center)
13	Total inpatient malaria deaths (with primary diagnosis as malaria)	MoH 301 MoH 268 (dist. hosp. or health center)
14	IPT 1 and IPT 2	MoH 405/ANC register

The problems with MIAS are discussed in Section 3.2.8. As designed, MIAS was linked to HIS when the file transfer protocol was in operation and when LMIS operated as a separate entity to manage commodities data. Currently, no direct links exist between MIAS and DHIS-2. Routine data are abstracted from various systems, such as DHIS-2 and IDSR, when needed for program monitoring and reporting, as in the quarterly surveillance bulletins, annual malaria reports, WHO annual reports, and donor reporting requirements like the Global Fund.

Figure 15: Summary of National and Sub-national Databases by Dimension



3.2.10 Capacity Area 10: Supervision and Auditing

In 2009, the malaria program review advocated for decentralization of services by having a new cadre of malaria coordinators at the subnational levels. A need was identified to develop a standard set of tools to help DMCCs and PMCCs carry out and report on routine malaria activities, such as supportive supervision, which was one of the core functions of this cadre of health workers.

A generic supportive supervision manual, tools, and checklists were developed to be adaptable for use in integrated supervision at all levels. The detailed checklist was, however, malaria-specific, covering all areas of service delivery at a health facility level.

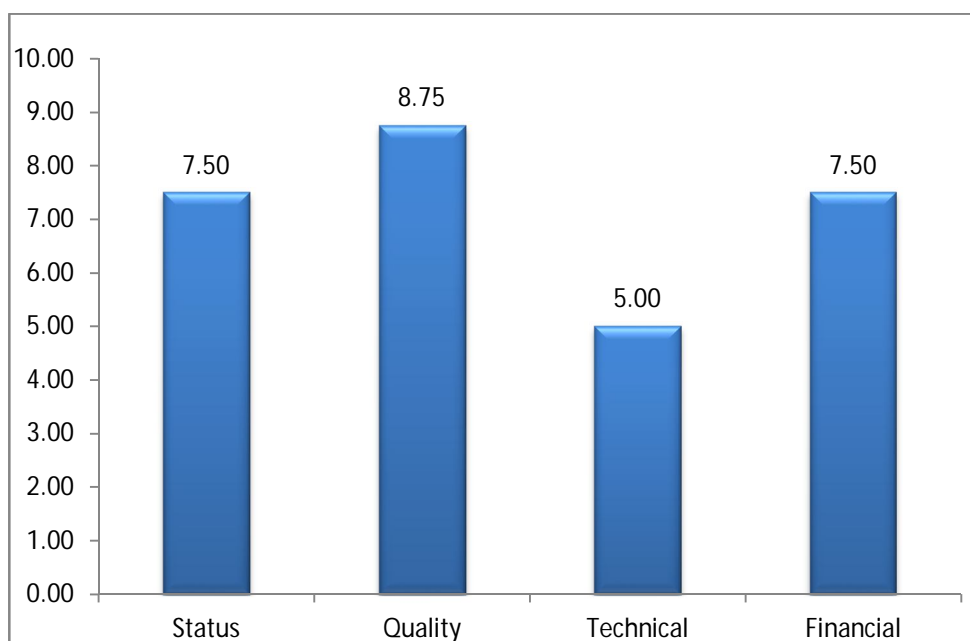
The draft manual and tools were pretested in Coast Province in 2010 and national roll-out was undertaken in 2011 (21). The supportive supervision checklists were further digitized into a PDA format in 2012. Here is a summary of the findings from the activities:

- The supportive supervision tool is comprehensive in all malaria intervention areas.
- Performance scoring is user friendly.
- The checklist is too long and might be hard to use in integrated supervision.
- Some questions in the checklist are not clear.
- The reporting framework is unclear, resulting in a variety of reports.

The activities demonstrated a need to strike a balance between detail and practicality of the tool, to help users (especially in scoring the checklist results), and to clarify roles, responsibilities, and expectations in reporting. Malaria supportive supervisions are largely conducted following the guidelines, but report compilation, especially at the subnational level, is difficult.

Draft guidelines based on the main MOH guidelines are available for data quality audits. Routine DQAs are carried out as part of Global Fund grant management conditions.

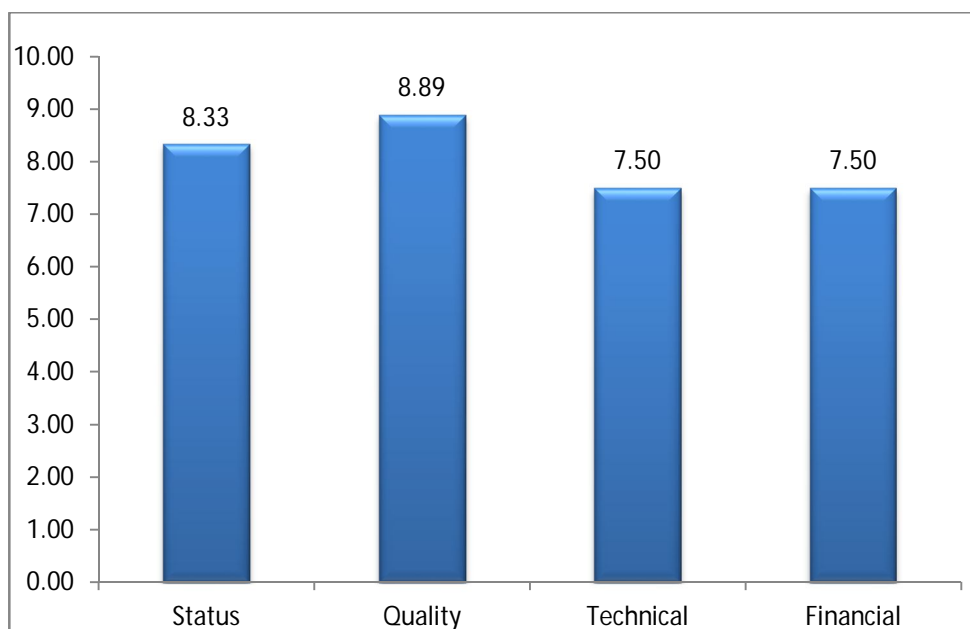
Figure 16: Summary of Supervision and Auditing Capacity by Dimension



3.2.11 Capacity Area 11: Evaluation and Research

DOMC has an inventory of institutions that conduct malaria research. A template was developed and shared with research partners as part of the activities of the Operations Research TWG. Some institutional details are available, and others require follow-up to complete the template. DOMC also has a national research agenda and key partners are represented in the ORTWG. Several operations research questions in the DOMC OR research agenda already have been developed into full protocols and are funded.

Figure 17: Summary of Evaluation and Research Capacity by Dimension



A national forum disseminates the findings of malaria research in Kenya. The first forum was held in October 2011. It brought together 135 individuals from several organizations that represent malaria programmers, policymakers, researchers, and the media. The forum agenda focused on DOMC data and information needs through a call for abstracts to respond to identified data and information gaps. The next Kenya National Malaria Forum is slated for 2014.

3.2.12 Capacity Area 12: Data Demand and Use

Data demand and use is one of the key glaring areas of weakness at DOMC. No comprehensive, national data use plans or data analysis and presentation guides exist; however, guidelines do exist for specific activities, such as for the biannual quality of care surveys and quarterly surveillance bulletins. Information products are produced regularly and seem to be useful in influencing policy and practice, but they are disseminated with implementing partner support. A need exists to “package information to different audiences, a lot of technical reports are written which may not be understood easily by audiences of different levels across the board.” (Stakeholder Informant K002)

While data use is rated highly as a key DOMC mandate, data use is acknowledged as a challenge. The main constraints to data use are lack of a demand-driven model for data (push as opposed to pull), poor availability of relevant data, lack of confidence in data quality (e.g., mortality data), and timeliness of reporting (DOMC Informants K001 and K003; Stakeholder Informant K002).

Another key impediment, especially at the subnational level, is a lack of capacity for data analysis and presentation. A good example of this is the IPTp indicator, where the denominator is districts where IPTp is recommended.. As one informant put it:

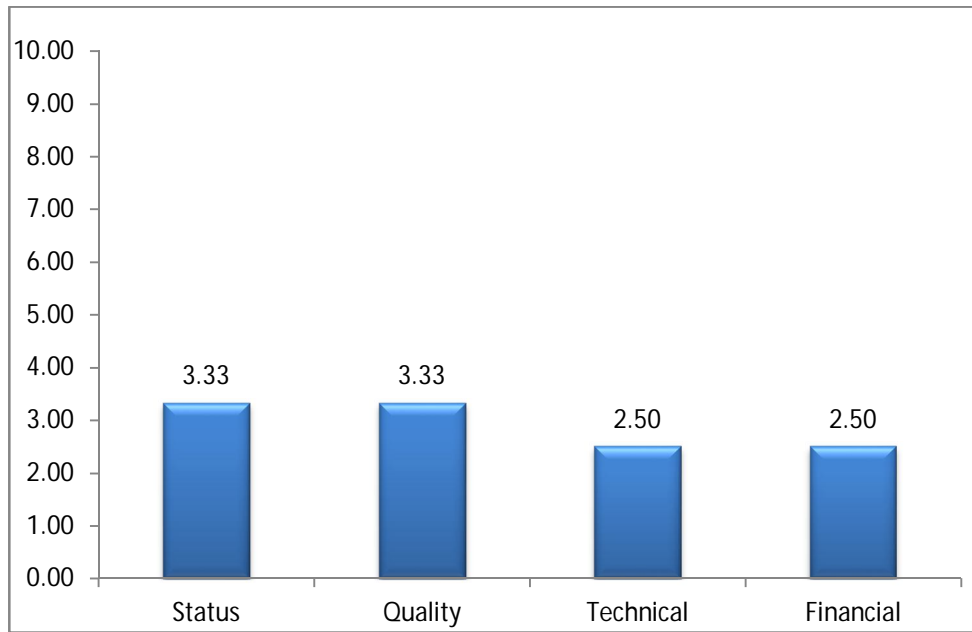
“Data management is still a major problem among DMCCs and service providers, for example the reporting of IPT2 [two doses of IPTp], most of the staff are reporting the IPT2++. A presentation of data analysis was done at the district level and the issue of weak data analysis was evident. The DMCCs don’t even understand the data.” (Stakeholder Informant K002)

Examples of data use for decision making are given, however, such as in the updating of national treatment guidelines, changing the focus of IPTp from national to high risk areas only, and the recent change in insecticides used for indoor residual spraying from pyrethroids to carbamates following high-resistance levels for the pyrethroids. Mitigating interventions in improving data availability for decision making, especially from research partners, are mentioned as one way to encourage funding from donors for certain partners to undertake key operational research questions for DOMC. Another way is through the institutionalization of data use forums, such as the Kenya National Malaria Forum 2011:

“We are also recommending some of them [research partners] to donors for funding, that is why they have softened up. Also the [Kenya National] malaria forum of 2011 helped a lot because it brought all partners together and this helped open doors.” (DOMC Informant K007).

“There is need to intensify forums for knowledge sharing, information and data sharing, like the meeting for evidence to policy forum [Kenya National Malaria Forum 2011]. This helps to identify gaps that are not met.” DOMC Informant K009)

Figure 18: Data Demand and Use



CHAPTER 4: DISCUSSION

This discussion puts into context some of the broad issues; Chapter 5 lists specific conclusions and recommendations.

4.1 PLANNING, COORDINATION, LEADERSHIP, AND MANAGEMENT

An overall improvement has taken place in the malaria M&E system in Kenya, and DOMC has been a beneficiary. Several issues come to the forefront as antecedents and also to put these improvements into context. From this M&E capacity assessment, it is clear that DOMC has a strong system that demonstrates its vision, mission, and values and proves that routine functions and activities are in line with its stated mission, vision, and values. This clarity of purpose, a Malaria-Free Kenya, is coupled with strong partnerships at the country level to deliver on DOMC's overall vision.

The antecedents are twofold. There is, and has been, a strong leadership and coordination mechanism provided by the international community in the form of the Roll Back Malaria Partnership and its various work streams, such as the RBM Monitoring and Evaluation Reference Group (MERG), which provided support in setting the global agenda for malaria control, providing countries with technical guidance as and when needed, and keeping the spotlight on malaria as an important public health disease that cannot be neglected. The RBM partnership model has had a massive effect in fund-raising for malaria control, and M&E has been a beneficiary.

During the first half of the Kenya National Malaria Strategy 2001–2010, resource constraints for malaria control was the main agenda. The Global Fund to Fight AIDS, TB, and Malaria (GFATM) came into being and Kenya received unprecedented funds to fight the disease, mainly through the Round 4 grant that was intended to scale-up proven interventions, such as the use of LLINs for malaria prevention and effective antimalarial drugs, such as ACTs, for treatment. Considerable investment came in cross-cutting supporting functions, such as advocacy, communication, and social mobilization of communities that are affected by malaria (22).

The second most important effect of the RBM Partnership model was its replication in the country as a tool for planning and coordination around malaria control in Kenya through the adoption of best practices, including development of the Kenya National Malaria Strategy 2001–2010 through broad-based consultations of all stakeholders (about 200 in this first strategy alone) and the development of companion documents on how to monitor and evaluate investments in malaria control (5).

The Kenya National Malaria Strategy 2001–2010 and its follow-on strategy, the current 2009–2017 strategy, both have clear governance structures, such as the Malaria Interagency Coordination Committee and the various technical working groups, such as vector control, case management, and M&E with clear terms of reference and membership. It is, therefore, not surprising that DOMC scores highly in organizational structure, partnership, and governance because these were imbued in its very founding ethos, thanks to the RBM partnership and the forging of strong in-country partnerships.

4.2 INCREASED CONFIDENCE IN ROUTINE HEALTH INFORMATION SYSTEMS AND IMPROVEMENTS IN ROUTINE MONITORING

As has been stated previously, DOMC currently relies heavily on routine systems, such as HIS, disease surveillance, and commodity management systems to derive data for its day-to-day monitoring and evaluation needs. An overall improvement in these routine health information systems (RHIS) has resulted from investments by partners, such as USAID, the Presidents Malaria Initiative, and GFATM, to bring them to their current level of performance. The investment process has come in two parts, first, through system development and second, through improving the quality of data coming out of the systems. Two examples suffice to make this point.

During the first phase of the Round 4 malaria grant, the Global Fund set one of its conditions precedents (CPs) as accountability for ACTs going through the national system. The key indicator for tracking this accountability was “the number of adults consuming ACTs” as measured through consumption of the adult treatment pack of 24 tablets. DOMC instituted, with finances from PMI and technical assistance from Management Sciences for Health and drug management partners, a short-term commodity management system and capacity building activities around drug management. The system was initially housed at DOMC, but eventually was streamlined into LMIS at the Kenya Medical Supplies Agency (KEMSA). LMIS already was assisting other public health programs, such as NASCOP, Reproductive Health, and blood safety divisions track their commodities. LMIS recently has been linked with DHIS-2 with the overall goal of one National Health Information System.

Although these systems had been set up, the big issue has been the timeliness of reporting and the quality of data. In subsequent grants, such as the current malaria Round 10 grant, the GFATM performance framework includes routine data quality audits to improve malaria data and, by extension, the overall data quality for the health system. A big investment has been made in the overall HIS by USAID and other partners, for example, through the Afya-Info project, which has resulted in an overall improvement in the data and confidence that programs like malaria can rely on to provide timely, high-quality data for malaria decision making.

For proper context and interpretation, however, the current confidence in the health information system to provide timely quality data for malaria control needs to be juxtaposed with what preceded it. Up to 2009, during the malaria program review that resulted in the National Malaria Strategy 2009–2017 and the National Malaria M&E Plan 2009–2017, DOMC relied on sentinel surveillance of communities in five districts to track progress on key malaria treatment and prevention indicators, among other key indicators. DOMC, in collaboration with the Malaria Public Health and Epidemiology Group of KEMRI/Wellcome Trust Program, selected 72 communities (18 enumeration areas per district) for Bondo, Kwale, Makueni, and Greater Kisii (Kisii and Gucha) districts.

The communities provided a quasi-demographic surveillance system. Each year in December the 72 communities were visited and homestead censuses were conducted to update homestead details, such as in-and-out migration, births, and deaths. Standard questionnaires were administered to homestead heads, women of reproductive age, and children 5 years of age and under to track indicators, such as the use of bed nets by vulnerable groups (pregnant women, children under age 5 years), preventive treatment for malaria among pregnant women, fever treatment seeking practices among children under age 5 years, community uptake of key malaria messages, and general knowledge attitudes and practices on malaria.

The surveys ran from the end of one year and the beginning of the next, and about five such surveys were conducted between 2004 and 2009, involving 2,700 homesteads and 18,500 people. The reports from these yearly surveys have been instrumental in showcasing Kenya's progress in meeting key RBM targets in malaria control (23, 24).

The move from sentinel surveillance of malaria indicators to use of RHIS shows the overall improvement in the latter. Improvements in the RHIS can be seen by looking closely at the results of the Global Fund MESST workshops and this assessment. Table 7 shows the system strengths and weaknesses identified during the last two MESST workshops, 2008 and 2011, using the M&E plan capacity area as an example (Personal Communication, Agneta Mbithi). Better structures, systems, and processes are evident with time, and from this assessment, overall improvements in the use of SOPs and routine data quality audits to improve data quality. The same improvements are evident in other capacity areas.

4.3 DATA DEMAND AND USE

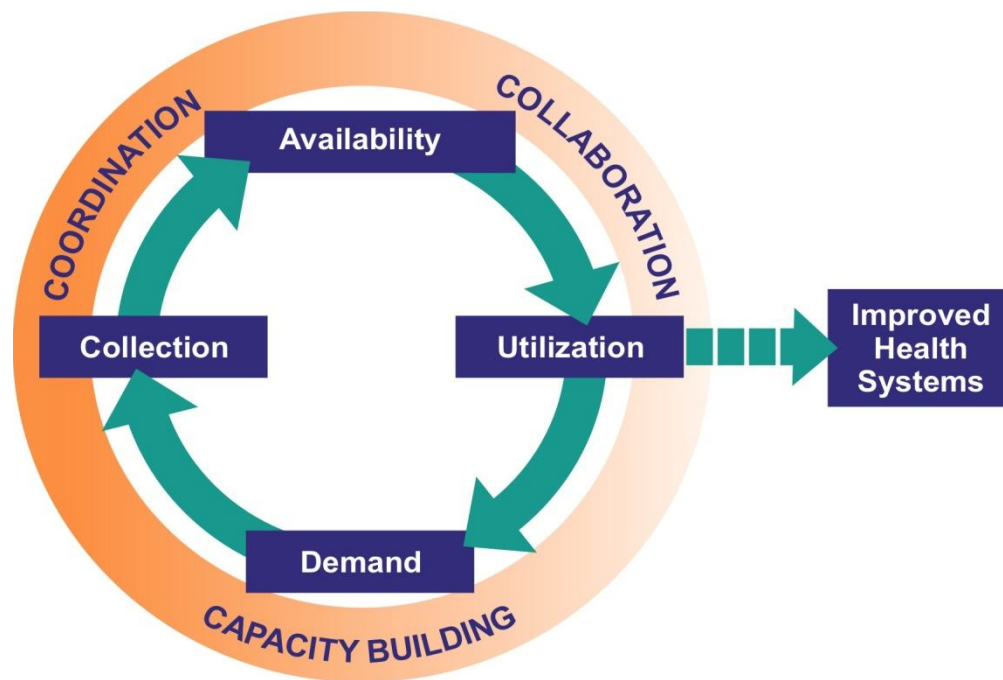
While the use of evidence to inform programming is not something new in DOMC, the lack of a more systematic approach to data demand and use has come up as a key finding. This is even more important at the subnational level where capacity for M&E competencies is limited compared to the national level. Conceptually, in addition to data collection and availability, evidence-based decision making requires these elements:

- Securing the technical and human capacity to manage and analyze the data
- Ensuring that the information is available and in a format that is easily understood by the relevant stakeholders
- Fostering the interpretation of the information and its ultimate use to improve policies and programs

The more positive experiences a decision maker has in using information to support a decision, the stronger the commitment will be to improve data collection systems and continue to use the information they generate (Figure 19).

A more rigorous positive approach to data demand and use would involve attention and investments in each of these elements, both national and subnational, and substantial behavioral change in pointing out decisions that need to be made, their frequency, the data needed to make such decisions in a data use and dissemination of a plan (25).

Figure 19: Data Demand and Use Cycle



4.4 SUSTAINING CAPACITY BUILDING IN THE CONTEXT OF DEVOLUTION

The assessment shows relatively high capacity in many M&E functions at DOMC, but DOMC as an institution is in flux in the context of devolution. In the previous dispensation, lack of adequate capacity for many areas of malaria control was well documented at the subnational level, including for M&E and efforts were under way to introduce a malaria training (with a surveillance and M&E module) using the malaria control coordinator training manual; about 40 officers benefited from such trainings.

With devolution, it is unclear how such capacity-building efforts will be sustained in the long-term. In addition, the role of DOMC at the national level has changed from policy formulation, guidance, and implementation to more emphasis on policy formulation and capacity building. Given this state of flux, the task is doubly hard with staff attrition and the added role of capacity building. Tools and resources are needed more now than ever before.

Table 7: Comparison of Malaria System M&E Strengths and Weaknesses in the Last Two MESST Workshops for the Capacity Area National M&E Plan

	MESST 2008	MESST 2011
System Strengths	<ul style="list-style-type: none"> We have the National Malaria strategy. The goals and objectives are time bound. All indicators were developed by all stakeholders, linked to the objectives and measure program performance progress at all levels. There are clearly defined data sources and frequencies of data collection for all indicators. Targets for behavior change and program monitoring are in place. Program reports are publicly disseminated. Protocols are in place for ensuring confidentiality of sensitive data. 	<ul style="list-style-type: none"> The national program has an M&E strategy and a plan in place linked to the National Malaria Strategy. Clear goals and objectives are measurable and time bound. Clearly defined indicators with set definitions measure disease trends, behavior change, and delivery of services and commodities by age and catchment area. The frequency in which data are collected is stated and feasible. The same data sources will be used to monitor progress. The indicators are internationally recognized and follow international guidelines. Data collection is coordinated with other research activities and large-scale surveys. M&E reports are available publicly and there are documented protocols for ensuring the confidentiality of sensitive data. M&E budget allocated is more than 7% of the program budget.
System Weaknesses	<ul style="list-style-type: none"> No consolidated M&E Plan. We have challenges in measuring ACT consumption and IEC/BCC coverage. No consistent feedback mechanism [to subnational levels], which needs to be strengthened. Survey plan is available, but the funds are being sourced. No mechanism is in place to measure quality of training and other services. No written policy exists on source document retention period (data archiving). No consolidated data dissemination plan is in place. No adequate budget is appropriated for M&E. The current budget process is not fully participatory for lower level implementing entities (such as districts). 	<ul style="list-style-type: none"> No consistent feedback mechanism from national to district level; however, after data management moves to the district level [through DHIS-2], this no longer will be a weakness. Challenges foreseen with feedback from district to health facilities. Need a more systematic method of regularly monitoring the quality of training across the board. No regular routine monitoring of quality of services. Data to monitor client satisfaction not specific for malaria, but is a cross-cutting issue. Some indicators have no baseline values. Dissemination plan not fully implemented. The M&E budgetary needs at the subnational level are not adequately met.

CHAPTER 5: CONCLUSIONS AND RECOMMENDATIONS

5.1 CONCLUSIONS

In conclusion:

- DOMC has a national policy with clear goals and objectives. Activities are aligned with these goals and objectives, including M&E activities.
- There are, and have been since 2001, clear governance structures with clear terms of references. These structures have been institutionalized over time and have become a common feature of malaria control in Kenya. They are derived from the wider best practices promoted by the Roll Back Malaria Partnership model.
- Processes, procedures, and standard operating procedures exist for most routine activities, such as data collection, collation, and dissemination; however, there is room for improvement in the overall area of data demand and use.
- There is, overall, good capacity for various aspects of M&E, but there is room for improvement in data dissemination and use and improved targeted evaluation competencies for key staff that are expected to be involved in evaluations.
- Although DOMC has good capacity for routine monitoring and evaluation, technical support from partners has been essential to deliver on DOMC's M&E mandate.
- Malaria control, as is common with other infectious disease control areas, is supported heavily by donors. For malaria, substantial funds are received from GFATM, the Government of Kenya, the President's Malaria Initiative, and the United States Department for International Development (Table 8). Despite the high level of funding for malaria, an estimated 40% funding gap exists to fully realize the national malaria strategy objectives (26).

Table 8: Malaria Financing FY 2011–2012

Malaria Financing by Year		2010–2011 (Millions Kshs)	2011–2012 (Millions Kshs)	2011–2012 (Millions US \$)
Government Contributions	Total Government Budget	977,000	1,154,900	13,749
	Recurrent Govt budget	640,000	787,000	9,369
	Health budget	41,500	64,000	762
	Malaria budget	224	224	2.7
External Contributions	Global Fund (All PRs)	3,242	1,048	12.5
	World Bank	546	756	9.0
	USAID/PMI	3,057	3,062*	36.5
	DFID/WHO	368	1,468	17.5
	UNICEF	-	29	0.3
	Others (NGOs, foundations)	-	20	0.2

* USAID PMI budgets for FY 2012 beginning October 2011 to September 2012. Source: DOMC data, Global Fund enhanced financial reporting, and PMI malaria operational plans.

Source: Annual Malaria Report, 2011–2012

- Despite improvements in data management, concerns have been raised on specific indicators and data elements, such as in-patient data, IPTp, and RDT consumption.
- The lack of technical and financial autonomy raises questions of program sustainability in the long term. This is not something that is restricted to malaria control; however, it is a broader question of sustainable development.

5.2 RECOMMENDATIONS

5.2.1 *Planning, Coordination, Leadership, and Management*

- In an era of devolution with a lot of uncertainty, DOMC needs to revisit its governance structures and partnerships built over the years using the Roll Back Malaria Partnership model, re-invigorate these partnerships, and align these with the new constitutional dispensation and the changing mandate of DOMC. A good starting point for such an exercise would be a detailed partners database at the national and subnational levels, with key data elements such as partner activity, key contacts, locations, and a network analysis of how these partner activities can be leveraged for malaria control.
- DOMC and partners should dedicate resources to institutionalize organizational development processes started in 2009, such as staff retreats and the organizational transformation process, induction of new staff into the vision and mission of DOMC, and targeted leadership and management capacity building for sustained results.

5.2.2 *Increased Confidence in Routine Health Information Systems and Improvements in Routine Monitoring*

- Considering the heavy investments in routine health information systems overall, of which DOMC has been a big beneficiary, DOMC should continue to advocate and champion for one National Health Information System as a sustainable solution to required information for routine program monitoring and evaluation.
- Despite improvements in data quality, the issues identified in certain malaria indicators, such as IPTp, laboratory data, mortality data, and commodity tracking, need urgent concerted efforts to sustain the confidence in routine health information systems. DOMC should reach out to concerned stakeholders to remove the bottlenecks identified with other agencies in the health sector.
- A key gap in routine program monitoring at DOMC is the link between programmatic and financial elements. DOMC needs to formulate clear guidelines for budget monitoring (e.g., customized dashboards) that include all key data elements (request dates, amount, disbursement date, activity, expenditure, and surrender) so that these can be tied with programmatic targets and timelines.

5.2.3 *Data Demand and Use*

- A more structured approach to evidenced-based decision making at DOMC requires revision of relevant technical documents, such as the national M&E plan; development of new technical guidelines, such as for data demand and use; and capacity building for competencies in data analysis, presentation, and use.
- DOMC needs to revisit the Malaria Information Acquisition System as a possible platform for knowledge management. Huge investments have gone into MIAS and a strategy for revitalizing it is required.

- DOMC should update the inventory of institutions that carry out malaria research and evaluations, including specific research activities undertaken so that data are available in time for evidence-based decision making.
- The first Kenya National Malaria Forum is consistently praised as an excellent avenue for promoting a culture of information sharing, learning, and inquiry. As such, DOMC and partners should embark on the process of planning for and executing the next Kenya National Malaria Forum to enable malaria researchers, policy makers, and programmers to exchange ideas.

5.3.4 Sustaining Capacity Building in the Context of Devolution

- To sustain capacity for M&E for both national and subnational levels, DOMC and partners need to advocate for and mobilize resources to meet NMS M&E budget targets through existing channels, such as the Resource Mobilization Technical Working Group, linking DOMC M&E resource needs with the MTEF process, and other channels as appropriate. Key technical documents that will inform such a process will be costed human capacity building plans for DOMC, training databases and strategies that articulate training needs and the existing capacity of those already trained, and a validated, multistakeholder malaria M&E curriculum that can be used at all levels of the healthcare system.
- DOMC should also share the resource envelope with subnational levels in time for their planning processes, and then review their plans and incorporate them into the larger national plan, and then include that into MTEF, the Annual Workplan, and the Malaria Business Plan.

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