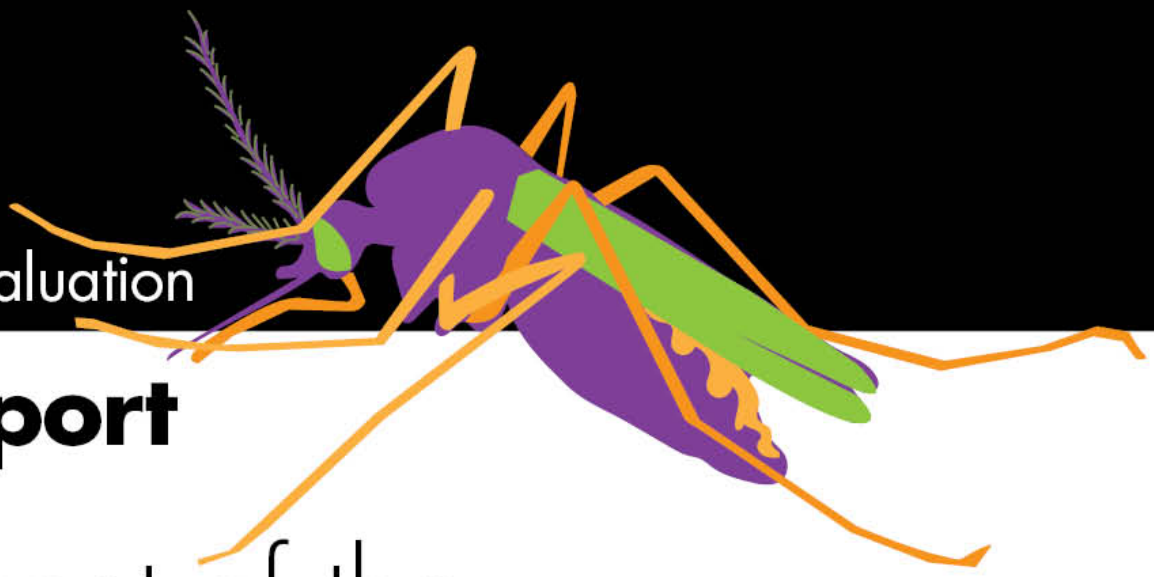

MEASURE Evaluation

Final Report

Assessment of the Effectiveness of Malaria Monitoring and Evaluation Regional Workshops and Online Training Course

November 2015
TR-15-120

President's Malaria Initiative

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ABBREVIATIONS

DFID	Department of International Development
DHS	Demographic and Health Surveys
DHSS	Demographic and Health Surveillance Sites
DRC	Democratic Republic of Congo
HMIS	Health Management Information System
M&E	monitoring and evaluation
NGO	nongovernmental organization
NMCP	National Malaria Control Program
PMI	President's Malaria Initiative
RBM	Roll Back Malaria
SSA	sub-Saharan Africa
USAID	United States Agency for International Development
USG	U.S. Government
WHO	World Health Organization

1. BACKGROUND

Substantial investments have been made in the last decade to improve the quality of services and coverage of major malaria control interventions and accelerate progress toward malaria elimination. As these investments continue and grow, sound programmatic decisions require strong monitoring and evaluation (M&E) systems to document progress in malaria control and ensure accountability of resources invested. In sub-Saharan Africa (SSA), the challenges M&E systems face sometimes impede efforts for generating evidence needed for informed decision making. In addition to the limited financial resources that malaria M&E systems in SSA face, they also must deal with poor access to technology and a lack of personnel with the required M&E knowledge and skills. Consequently, the quality of data generated by existing M&E systems has been questionable.

MEASURE Evaluation, with funding from the U.S. Agency for International Development (USAID) and the President's Malaria Initiative (PMI), has been a significant supporter for M&E systems of national malaria control programs (NMCPs). One means of support has been MEASURE Evaluation's efforts to strengthen malaria M&E capacity by offering M&E training targeting mainly M&E professionals who work on malaria at national, regional, and district levels; professionals who work on USAID projects; and employees of nongovernmental organizations (NGOs). The training has been through in-person regional workshops and online training courses. The two-week intensive in-person workshop format was used from 2010 to 2014 in annual workshops in Ghana (Anglophone) and Burkina Faso (Francophone).

Funding for participants came mostly from MEASURE Evaluation, participants' institutions, or other organizations. Some participants were self-funded. MEASURE Evaluation staff and local M&E experts from Ghana and Burkina Faso jointly facilitated the training workshops. During the project period, 181 health professionals from SSA received training on malaria M&E fundamental concepts, program applications, and tools and data systems used to monitor and evaluate malaria programs. The workshops also provided hands-on experience in developing M&E plans. During each workshop, pre- and post-training tests were conducted to assess participants' reaction to the training and gain in knowledge and skills. Follow-up assessments were planned to evaluate the program's impact on M&E capacity of trainees and effectiveness in program strengthening. An additional benefit for participants was the opportunity to share and learn from participants from other countries.

The online training course provides an alternative option for participants who cannot attend in-person training courses. The course, launched in December 2012, is available free of charge to interested M&E professionals. Modules cover an overview of malaria, data use for decision making, an introduction to M&E, M&E plan development for malaria programs, M&E frameworks and indicators, and malaria M&E data sources, data analysis, and data interpretation and presentation. By the end of April 2015, the course had registered 1,163 students. Of that number, 549 completed the course and scored the required 80 percent or higher on the final course exam to receive the course certificate.

To identify strengths, weaknesses, and areas that need improvement, MEASURE Evaluation undertook an assessment of the in-person workshops and online training course. This report provides the results of the training program evaluation, based on information from participants'

surveys at the in-person workshops, participants' supervisors[1] or referees who supported participants' application to attend the M&E training course, and other stakeholders interested in malaria M&E. Additional information came from users of the online training course who did not complete the end-of-course certification exam and students who completed the online course and examination. MEASURE Evaluation and USAID PMI will use this assessment to guide the design and implementation of future malaria M&E training programs.

2. EVALUATION OBJECTIVES

This evaluation was undertaken to identify strengths, weaknesses, and areas that need improvement for both the in-person workshops and the online courses. The evaluation had the following two objectives:

1. Assess the achievements and results of the in-person regional M&E capacity-building workshops between 2010–2014 (Francophone and Anglophone), considering specifically these three areas:
    a. Participants' retention of knowledge delivered in the M&E of malaria programs training workshop
    b. Participants' application of knowledge and skills gained during the M&E of malaria training workshops and list of skills and knowledge they have applied in their current work
    c. Areas for potential improvements
2. Assess the effectiveness of the online training course and identify improvements needed to build M&E capacity, considering specifically these four areas:
    a. Participants' perception of the online course, whether it met their expectations, and the relevance of the content for their jobs and professional activities
    b. Participants' intention to use the material learned in the course in their jobs and professional activities and the specific information and skills they expect to use
    c. Participants' reasons for not completing the course (when applicable)
    d. Areas for potential improvements in course content and the user interface

3. EVALUATION METHODOLOGY

3.1 Background Literature Review

A literature, documents, and reports review on previous regional malaria M&E and online training courses provided background for the design of the survey protocol and questionnaires, which MEASURE Evaluation reviewed and approved. The survey was conducted from April to May 2015.

[1] In this report, a supervisor refers to a person who directs or oversees the work of participants in the in-person M&E training course or a person OR referee who supported a participant's application to attend the course.

3.2 Evaluation Framework for M&E Training Programs

MEASURE Evaluation used the Donald Kirkpatrick four-levels method, the most commonly used model for training evaluation, to assess the effectiveness of the in-person malaria M&E training program. According to Kirkpatrick's concept, capacity development is achieved in four sequential steps: Level 1, reaction; Level 2, learning; Level 3, behavior; and Level 4, results as tangible outcomes of behavior change. Level 1 measures satisfaction, Level 2 measures increase in knowledge and capability, Level 3 measures the extent of behavior change and improvement of trainee capability and implementation of knowledge and skills gained, and Level 4 measures the effects on institutional environment and impact on organizational performance. The model provides a simple language for talking about training outcomes and information that needs to be gathered to assess the achievement of a training program's objectives. This survey focused on Levels 2, 3 and, to some extent, 4, considering the challenges associated with measuring levels 3 and 4.

3.3 In-person Malaria M&E Workshop Evaluation

Participants: The MEASURE Evaluation database provided a list of potential survey participants since the launch of the training program in 2010: a total of 181 M&E professionals who attended the in-person regional workshops (120 Anglophones, 61 Francophones), 41 supervisors, and 33 stakeholders.

MEASURE Evaluation designed the participants' questionnaires in English and French and posted them online using SurveyMonkey® (www.SurveyMonkey.com). The first section of nine questions identified participants; the second section of 10 questions came from pre- and post-training tests to assess knowledge and skills retained; the third section of 19 questions sought how knowledge and skills have been applied and how M&E systems have changed, appreciation of course modules, willingness to promote the course, and recommendations for future training programs. The Anglophone and Francophone pre- and post-tests asked different questions and, therefore, the questions to assess knowledge and skills also differed in the assessment survey.

Participant survey candidates were invited by email to complete the questionnaire online through the link provided. Survey candidates were given seven days to complete the questionnaire. Candidates who did not complete the questionnaire after seven days received a reminder email, with a maximum of three reminders. Several participants were also contacted by telephone. Of the 181 candidates, 117 Anglophone and 60 Francophone participated.

Supervisors and referees: Candidate supervisors and referees received similar survey invitations to participate online. The survey for supervisors and referees had 20 questions designed to gain information on how the malaria M&E course had benefitted participants and their organizations, how participants applied knowledge and skills acquired, if they would recommend the course to other M&E professionals or support new applicants to attend the training course, gaps in M&E capacity building, and recommendations for improving future malaria M&E training courses. The supervisor and referee survey (20 Anglophone, 21 Francophone) used the same questions for both languages.

Stakeholders: The MEASURE Evaluation database provided a list of 33 stakeholders from government, institutions, and organizations that work in SSA, including ministries of health, USAID missions, PMI, Plan International, and other NGOs that have been involved in the M&E training

program since it was launched—mainly funding trainees. MEASURE Evaluation selected a purposive sample of 18 of the 33 stakeholders, representing 14 countries in SSA and the United States for in-depth interviews. Candidates received information about the survey before they agreed to participate. The in-depth interview consisted of 10 open-ended questions focused on the type of support provided to the malaria M&E training program, reasons and expectations for program support, whether training program expectations were met, willingness to support trainees to attend the course with its current format and content, gaps in M&E capacity building, and recommendations for future malaria M&E training programs. MEASURE Evaluation conducted the interviews via Skype calls; however, stakeholders were also offered the possibility of responding in writing.

3.4 Online Training Course Evaluation

The online malaria M&E training course evaluation had two components: (1) analysis of existing data from end-of-course evaluations by students who completed the course and received a certificate of successful completion and (2) a survey of participants who registered for the course, were active, but did not complete the course or take the final course exam to receive a certificate.

This end-of-course evaluation, which collected information from participants between 2012 and 2014, asked the following questions:

- Did the course content meet your expectations?
- Were the topics relevant for your job or professional activities?
- Do you plan to use the material learned in your job or professional activities, and if so, which specific information or skills were helpful?
- Was the course navigation user-friendly?
- Can the course content and design be improved?
- Would you recommend the course to others?

Students who did not complete the course: The MEASURE Evaluation database provided a list of 569 students who registered for the course and were active, but who did not fully complete the online course. The online training resource was launched in 2012; however, MEASURE Evaluation decided the survey should target candidates who registered in 2014 and 2015 to reduce the potential of recall bias and difficulty in tracing students. Of the 569 candidates, MEASURE Evaluation selected 295 participants for the survey. The online survey assessed participants' perception of the course, the knowledge and skills they gained, how they used the knowledge and skills in their activities, and recommendations for course content and user-interface improvements. The survey also asked why they did not complete the course.

3.5 Data Analysis

MEASURE Evaluation extracted the quantitative data into Excel and transferred them into STATA (www.stata.com) for analysis.

Means and medians of knowledge evaluation scores were determined for Anglophone and Francophone participants. These parameters were also determined for all questions on knowledge evaluation that required rating, and they were analyzed for means and median scores. The analysis

used *Student's t* tests to compare pre- and post-training means scores for organizations' M&E capacity, as perceived by participants. Anglophone and Francophone data were not compared in the analysis, because that exceeded the scope of this evaluation.

For the qualitative data (text) in response to the question about the online user interface, MEASURE Evaluation selected a random sample of 20 percent of the participants.

4. REGIONAL WORKSHOP EVALUATION RESULTS

Participants' characteristics: The MEASURE Evaluation database provided a list of 117 Anglophone participants and 60 Francophone participants from the in-person training workshops. The response rate was relatively low at 39 (33.3%) Anglophone participants and 31 (51.6%) Francophone participants. Some participants completed only the first section, on participant identification, of the questionnaire, and their surveys were excluded from the analysis results. The final analysis included surveys from 32 Anglophone and 29 Francophone participants. Table 1 reports the results on participant characteristics. Most Anglophone (68.2%) and Francophone (82.8%) participants were male. Anglophone and Francophone participants had an average of six years of work experience and at least nine in ten (Anglophone) and three in four (Francophone) participants worked in the malaria field. Most participants were involved in M&E activities, but fewer than half of the participants had taken part in other M&E training courses other than a MEASURE Evaluation regional training workshop (43.8% Anglophone, 34.5% Francophone).

Table 1: Survey participants' characteristics

	Anglophone participants (*n*=32)	Francophone participants (*n*=29)
Sex		
Male (%)	68.2	82.8
Female (%)	31.8	17.2
Number of years of work experience		
Mean (95% CI)	5.62 (4.50; 6.63)	5.89 (4.54; 7.24)
Median (minimum, maximum)	5.0 (0.25; 15)	5.0 (0; 17)
Number currently working in malaria field (%)	29 (90.6)	22 (75.9)
Number involved in M&E activities (%)	31 (96.9)	26 (89.7)
Number who attended other M&E training course (%)	14 (43.8)	10 (34.5)

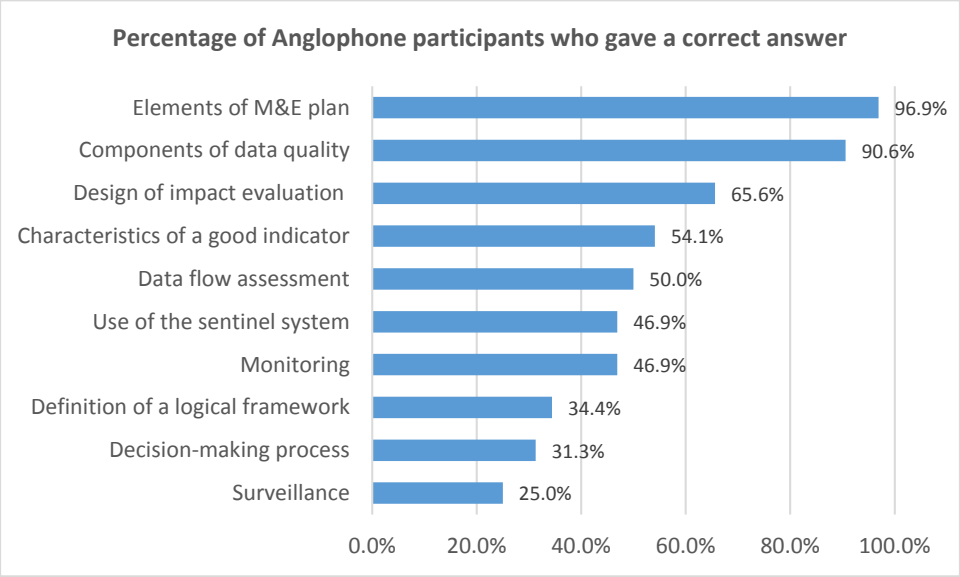
Participants' retained knowledge and skills: To assess participants' retained knowledge after the workshops, the survey asked them to complete 10 questions without referring to any M&E-related material. Table 2 gives the results. The means for Anglophones were 5.90 (9%) and for Francophones, 6.47 (64.7%).

Table 2: Mean and median scores of knowledge and skills retained

	Anglophone participants *n*=32	Francophone participants *n*=29
Mean (95% CI)	5.90 (5.24; 6.57)	6.47 (6.03; 7.45)
Median (minimum, maximum)	6.0 (1.5; 8.5)	7.5 (3.5; 10)

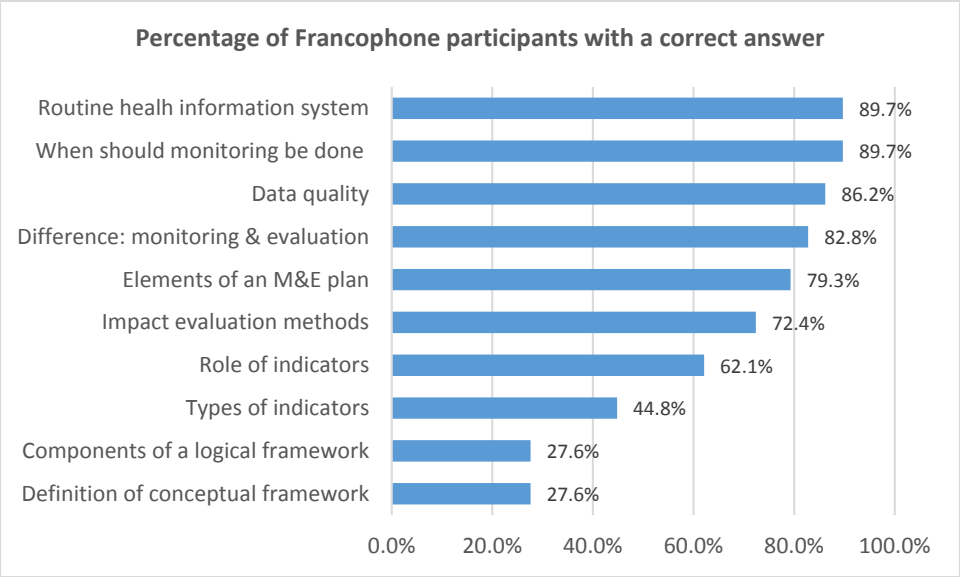
Further analysis indicated that participants in the Anglophone training course showed average retention of knowledge on most questions (Figure 1) and poor retention on questions about the definition of a logical framework, surveillance, and the decision-making process. Many participants were more comfortable with questions about the elements of an M&E plan and components of data quality.

Figure 1: Performance of Anglophone participants on evaluation questions



Francophone participants in the M&E training course performed poorly (Figure 2) on questions about the components of a logical framework and the role of the conceptual framework; fewer than 30 percent of the participants gave a correct answer. The participants' performance on the two questions on indicators was about average, and their performance on the rest of questions was good to excellent.

Figure 2: Francophone participants' performance on evaluation questions



When participants were asked to rate on a scale of 1 (not at all) to 10 (greatly) the extent of their ability to apply in their work the knowledge and skills learned in the malaria M&E training, all groups gave a score higher than the average (Table 3).

Table 3: Participants' application of knowledge and skills in their work

	Anglophone participants *n*=29	Francophone participants *n*=28
Mean score (95%CI)	7.65 (7.10; 8.20)	8.53 (8.05; 9.00)
Median score (min, maxi)	8.00 (5; 10)	9.00 (5; 10)

Participants were asked to rate, on a scale of 1 (not at all) to 10 (greatly) to what extent they have applied knowledge and skills learned from each training module to carry out their work. Participants scored above average (5) on all course modules, except the Anglophone participants (4.86) for the sentinel surveillance sites module. The Anglophone (5.41) and Francophone (5.82) participants scored low on the demographic and health surveillance sites (DHSS) questions (Table 4). Both groups scored highest in questions on implementation of M&E knowledge and skills; data use for decision making; calculation and interpretation of indicators; data source, data management, and data presentation; and demand and utilization.

Table 4: Participants' self-rating of applied knowledge and skills

		Anglophone workshop			Francophone workshop		
	Course module	**Mean**	**Median**	**(Min; Max)**	**Mean**	**Median**	**(Min; Max)**
A	Malaria in SSA	7.24	8	(3; 10)	7.36	8	(1; 10)
B	M&E concepts	8.24	8	(5; 10)	8.75	9	(5; 10)
C	Data in decision making	8.59	9	(2; 10)	8.60	9	(1; 10)
D	Developing an M&E plan	7.76	8	(1; 10)	8.21	9	(1; 10)
E	Frameworks	7.48	8	(1; 10)	7.92	8.5	(1; 10)
F	Indicators	8.76	9	(5; 10)	8.92	9	(6; 10)
G	Calculating and interpreting indicators	8.34	8	(5; 10)	8.86	9	(5; 10)
H	Data sources	8.00	8	(1; 10)	8.82	9	(1; 10)
I	Surveys	6.90	7	(1; 10)	7.46	8	(1; 10)
J	Routine health information system	7.34	8	(1; 10)	8.29	9	(1; 10)
K	Sentinel surveillance sites	4.86	5	(1; 10)	5.96	7	(1; 10)
L	DHSS	5.41	6	(1; 10)	5.82	8	(1; 10)
M	Evaluation methods	6.76	8	(1; 10)	7.32	8	(1; 10)
N	Budgeting an M&E plan	6.96	8	(1; 10)	7.50	9	(1; 10)
O	Data management, analysis & quality	8.37	9	(1; 10)	8.64	9	(2; 10)
P	Presentation: data demand & utilization	8.69	9	(6; 10)	8.50	9	(3; 10)

To further assess current knowledge and skills, MEASURE Evaluation asked participants to rate their current knowledge and skills on each module. Most participants from the two groups rated the modules at 7 or higher, out of a range of 1–10 (Table 5). These self-ratings were higher than the end-of-workshop post-test scores, as reported earlier in Table 2, that assessed knowledge and skills retained (5.90 for Anglophone and 6.47 for Francophone). The average combined scores for all course modules on how participants perceive their current knowledge (7.71 for the Anglophone and 8.43 for the Francophone group) indicate that participants may have overestimated their current knowledge levels. Of all the modules, participants rated the modules on sentinel surveillance sites and DHSS the lowest.

Table 5: Participants' perception of current knowledge by course topic area

		Anglophone			Francophone		
	Course module	**Mean**	**Median**	**(Min; Max)**	**Mean**	**Median**	**(Min; Max)**
A	Malaria in SSA	7.03	8	(1; 10)	8.34	8.5	(5; 10)
B	M&E concepts	7.97	9	(1; 10)	8.80	9	(7; 10)
C	Data in decision making	8.37	9	(3; 10)	9.00	9	(7; 10)
D	Developing an M&E plan	7.90	8	(1; 10)	8.46	8.5	(6; 10)
E	Frameworks	7.69	8	(1; 10)	8.65	9	(6; 10)
F	Indicators	8.52	9	(2; 10)	9.07	9	(7; 10)
G	Calculating and interpreting indicators	8.31	9	(2; 10)	9.07	9	(7; 10)
H	Data sources	8.34	9	(2; 10)	8.88	9	(5; 10)
I	Surveys	7.41	8	(1; 10)	8.27	9	(6; 10)
J	Routine health information system	7.79	8	(1; 10)	8.61	9	(6; 10)
K	Sentinel surveillance sites	6.21	7	(1; 10)	7.11	7.5	(2; 10)
L	DHSS	6.62	7	(1; 10)	7.03	8	(1; 10)

M	Evaluation methods	7.24	8	(3; 10)	8.34	9	(5; 10)
N	Budgeting an M&E plan	7.31	8	(1; 10)	7.96	8.5	(4; 10)
O	Data management, analysis & quality	8.31	9	(3; 10)	8.69	9	(4; 10)
P	Presentation: data demand & utilization	8.41	9	(3; 10)	8.65	9	(4; 10)
	Average	7.71			8.43		

It is important to highlight that some participants reported they have received additional training or that they refer regularly to the course materials to help them in work activities, which might boost their confidence in their abilities in some course topics. Some participants reported a lack of opportunities to apply and sustain knowledge and skills in specific modules, because of the types of activities they have been working on; others gave high ratings to modules that contribute to their routine activities, thus providing more opportunity to sustain knowledge; and some participants rated modules lower if they lacked enough detail or opportunities to sharpen knowledge and skills gained, such as this participant:

> *I have recently not been applying the concepts and as such I have lost some skills and knowledge in the aforementioned subjects. That is not to say that the training was not useful. It is a question of practicing and using the skills acquired that has not recently arisen since I completed the training.*

The survey asked participants if they have been able to introduce M&E changes or new ideas in their work after participating in the M&E training course. The survey asked them to provide at least one example to support their statement. Nearly all participants (Anglophone, 96.6%; Francophone, 100%) reported that they were able to introduce some changes or new ideas after attending the course. Only one trainee from the Anglophone group was not able to introduce changes and made the following comment:

> *My current work is individual. I do not have an opportunity to train others, and therefore it has been difficult for me to share or introduce changes.*

The most common changes or new ideas that participants have introduced can be regrouped into changes or new ideas that involve development, introduction, or revision of M&E plans; data quality; introduction of new tools for data collection and management; data analysis and revision; and introduction of new indicators (Table 6). Some of the changes or new ideas reported by participants appear to reflect normal routine M&E activities, which may indicate that the number of participants who reported having introduced changes or new ideas to their M&E system may be slightly exaggerated. The survey indicates that it is possible that participation in the M&E training course has contributed to important changes in attitude toward M&E activities.

Table 6: Examples of changes or new ideas participants say they introduced in their workplace

	Anglophone	Francophone
Developing an M&E plan	• Developed an annual work plan • Developed an M&E plan for a program • Developed an M&E plan for my organization • Influenced African Medical Research Foundation Uganda office to establish a country M&E plan • Reviewed or revised the M&E plan • Advocated successfully for the introduction of M&E activities despite limited program resources	• Developed an M&E plan for the construction of a cancer center • Developed M&E plan and budget for all projects • Developed district action plan • Developed regional performance plan • Developed new provincial data collection plan • Introduced weekly monitoring of malaria incidence data
Data quality	• Brought team to focus on data quality • Introduced review of data at all levels to improve quality -------	• Improved data quality and use for decision making • Introduced malaria mortality data audit • Introduced quarterly data quality audits
Introduce, revise tools	• Introduced data-computing tools in health facilities for data compilation • Used mobile phone application to collect routine facility data ------- -------	• Introduced Gantt charts for project management • Introduced open access software for data management • Introduced M&E standard operating procedures • Updated data collection tools for epidemic surveillance and sentinel sites
Data analysis	• Changed the way data analysis and interpretation were performed • Introduced data analysis at all levels of the health system • Analyzed our data before sending to the national level	• Changed data analysis approach ------- -------
Indicators	• Introduced clear definitions for Indoor Residual Spraying indicators • Reviewed and adapted indicators • Introduced a process for timely reporting	• Introduced new indicators for the supervision of malaria activities • Updated the logical frame to take into account relevant indicators -------
Reporting	• Introduced quarterly reporting instead of annual reporting • Achieved timely submission of accurate and complete reports	------- -------
Decision making	• Implemented data use for decision making • Improved use of data for decision making	------- -------
Data presentation	• Introduced routine presentation of M&E data to program leadership ------- -------	• Developed appropriate community-level presentations for results dissemination • Changed data presentation • Introduced process for data dissemination
Others	• Introduced M&E concepts to PhD training research • Modified the supervision checklist • Motivated staff by providing feedback • Built M&E capacity for a project	• Introduced minimum standards for concept notes and proposals • Trained health workers in M&E basics ------- -------

The majority of participants (Anglophone, 100%; Francophone, 92.6%) reported they use the course material to execute M&E-related activities. Participants reported they most frequently use course material for training and developing or revising an M&E plan or specific elements of an M&E plan (Table 7). Training activities involved training of colleagues and other M&E professionals, including district personnel, in M&E in general or specific M&E aspects as part of the trainee's duties in the institution or consultancy. Use of the course material for developing or revising an M&E plan or specific elements of an M&E plan include defining indicators, designing frameworks, analyzing data, and preparing presentation for results dissemination.

Most participants reported they have recommended the course to colleagues or shared the training materials with colleagues or other individuals (Figure 3). At least half the Anglophone participants reported they have trained colleagues or collaborators or provided M&E support to other organizations. Fewer than half of the Francophone participants reported that they have only trained colleagues and collaborators and only 32 percent reported they have provided M&E support to other organizations.

Figure 3: Participants' promotion of the M&E course and material sharing

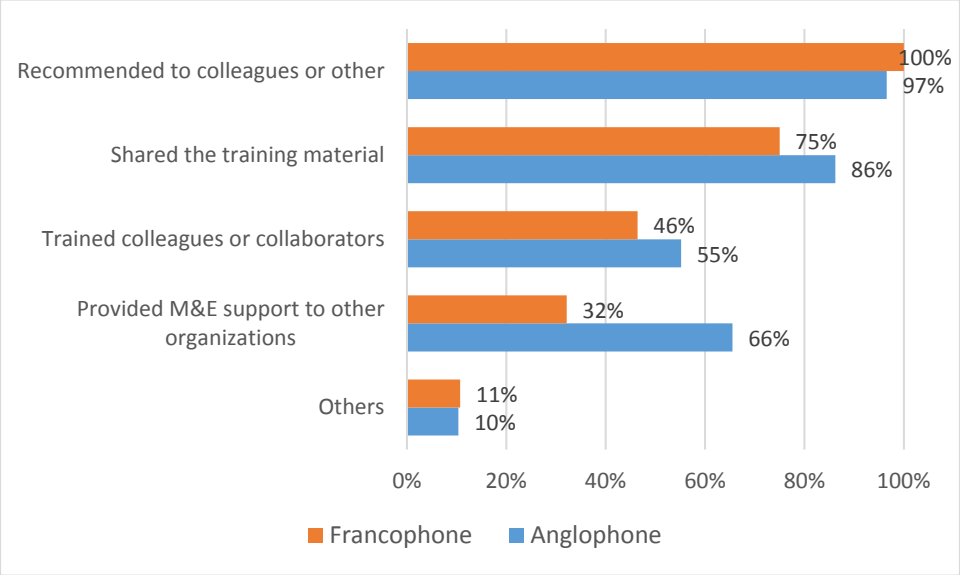
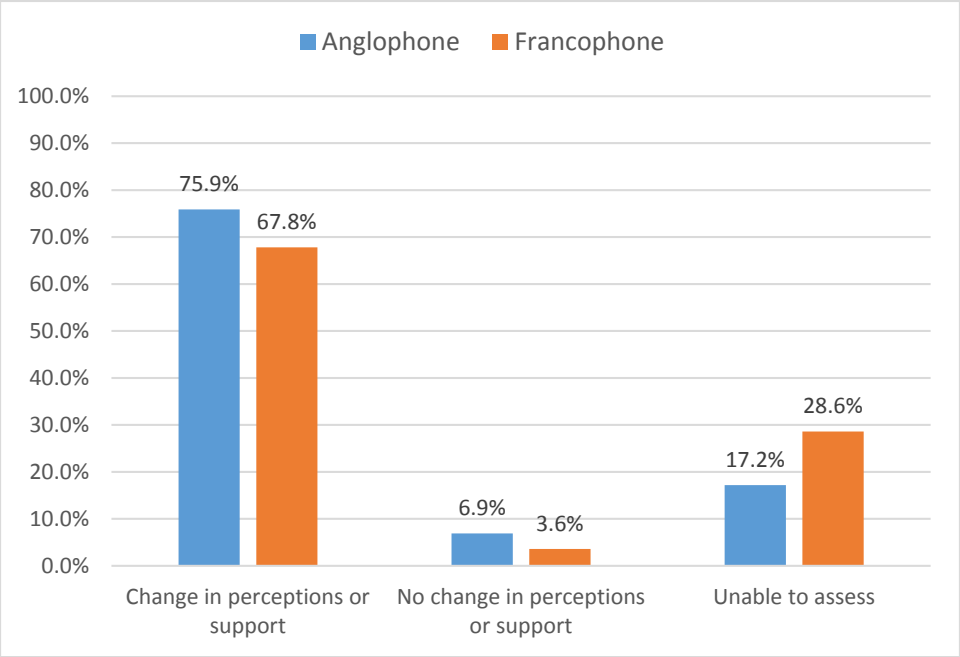


Table 7: How participants used course material after the training

How participants used course material	Anglophone	Francophone
Training	• As reference for training and retraining staff *(mentioned 8 times)* • As reference material during the training of district biostatisticians • As M&E training material for health services providers • As reference material for PhD training • As resource for slide on data quality to train USAID partners to improve data quality • For consultancy (training personnel for MSH degree)	• As reference for training and retraining of staff *(mentioned 5 times)* • As training material for colleagues and district health management team • As material for group work during workshops ------- ------- -------
Development, review of M&E plans or specific M&E documents	• As guide for general development of M&E plan *(mentioned 3 times)* • As reference for development of M&E plan for USAID projects • As review of existing M&E plan • As guide to develop logical frameworks for M&E plan for malaria proposal • As reference to develop internal routine monitoring document • As guide to develop conceptual and logical frameworks and project monitoring plan	• To develop M&E plan for a Global Fund grant (M&E design and implementation plan) • To develop frameworks for project M&E plan • To update indicators, set objectives, and develop M&E plan for different projects • To develop M&E standard operating procedures • To develop a conceptual framework
Sharing the material with others	• By sharing material with colleagues • By sharing material on LinkedIn frameworks with an evaluation group via	------- -------
Data analysis	-------	• As reference for data analysis • As tool in routine analysis to manage data at peripheral health centers
Others	• As resource for proposal writing and consultancies • As reference for project meetings preparation • As preparation for a presentation to district malaria team on data quality	• As reference material for my work *(mentioned 2 times)* • As reference to write malaria operational research proposal -------

Most Anglophone (75.9%) and Francophone (67.8%) workshop participants (Figure 4) indicated that after they returned from the training they perceived a change in the way their supervisor supported M&E activities. Only a small number in the two groups believed no change occurred after attending the training, but they did not explain.

Figure 4: Participants' perception of change in supervisor's support for M&E activities



Most frequent changes reported by trainees were more trust from the supervisor about the trainee's M&E abilities (cited 13 times), supervisor's better awareness about the importance of M&E (cited 10 times), and increased support for M&E activities (cited 8 times). Specific types of changes in the supervisor's support for M&E activities that participants perceived were recognition of the improvement of knowledge and skills or competence and more confidence and trust in trainee's ability to perform M&E activities, which resulted in assignments with additional responsibilities, better support for M&E activities, and hiring new personnel. One participant made the following comment about the increased supervisor support:

> *[My supervisor] appreciated the increased knowledge gained in key concepts of M&E and gave me more freedom to conduct analysis and data management independently.*

Some participants also reported a supervisor's increased interest in M&E activities as a result of an improved understanding of their importance in achieving program performance or improved support by allocating funds for M&E activities. Following are comments from two participants:

> *My supervisor became more focused on evidence base, mentoring and improving data quality.*

> *My supervisor pays great attention to all suggestions pertaining to M&E and supported in funding some of the activities.*

More than half of the participants (Anglophone, 68.2%; Francophone, 52.6%) reported being promoted to other positions, including several senior positions, or securing employment elsewhere after attending the regional M&E training course. Six participants reported that they were appointed

lead or coordinator of M&E activities. Other participants reported being nominated for director of a program or services, project manager, or head of research and surveys.

Participants were invited to rate, on a scale of 1, very poor, to 10, excellent, their organization's M&E capacity before and after they attended the M&E training course. Participants' assessment of their organization's M&E system capacity suggests significant improvements after the participants' training, with similar scores reported by Anglophone and Francophone participants (Table 8). Some participants reported that their M&E system has been better organized or more functional, as reflected in the following comment:

> *We used to have some discrepancies in data and in reporting but with using an online data management software along with training of the staff in M&E after having the training, the quality of data has been improved remarkably both in data collection, in reporting, to mention few.*

Other participants, however, did not report such positive outcomes in their organizations.

> *Our M&E system only cares about the database.*
>
> *Our leaders do not use our competences.*

Table 8 : Participants' perception of their organization's M&E capacity before and after training

	Anglophone participants			Francophone participants		
	Mean (95%CI)	**Median**	**(Mini; Maxi)**	**Mean**	**Median**	**(Mini; Maxi)**
Before	5.86 (5.16; 6.56)	6	(3; 10)	5.92 (5.35; 6.49)	6	(1; 8)
After	7.97 (7.47; 8.46)	8	(5; 10)	8.19 (7.27; 8.96)	9	(1; 10)
	P<0.0001*			P<0.0001*		

**t*-test for equal means

While most participants acknowledged an overall improvement in their current M&E systems, several said they would welcome refresher training courses to ensure sustained knowledge and skills and better performance. Two participants proposed introducing online refresher courses, which suggests the need for more advertising of MEASURE Evaluation's online training resource. Another need that surfaced from participants' comments was support for data analysis using various computer programs.

The survey also asked participants to make suggestions for expanding or improving current USAID and MEASURE Evaluation investments. Here is a summary of the most common suggestions:

- MEASURE Evaluation and USAID should initiate a global advocacy campaign in collaboration with other key international partners, such as the Global Fund, the British Department of

International Development (DFID), World Health Organization-Roll Back Malaria (RBM), Belgian Cooperation, and any other bilateral partner with an interest in malaria M&E.

- Organizations interested in malaria M&E could also explore best ways to join assets for a more efficient approach to strengthening malaria M&E capacity.
- MEASURE Evaluation and USAID should advocate for the Global Fund to add a budget line for M&E capacity strengthening in its country grants or advocate for the budget to be used appropriately.
- A partnership with the West African Health Organization and advocacy at the national level could help raise awareness about the importance of M&E and solicit integration of M&E activities into the annual budget of the Ministry of Health. These combined efforts could contribute to reducing or removing course fees and increase course attendance.

Additional comments from participants suggested the establishment of an alumni group of M&E trainees to share experiences and best practices and mentoring and cross-attachment of M&E personnel among organizations to sustain knowledge and skills and M&E capacity. Periodic conferences would encourage discussion of M&E results and issues on emerging trends in M&E. One participant made the following comment that course organizers should "establish robust alumni to meet every two years to review the trainings and give feedback on the impact to M&E work." Other participants suggested expansion of training venues to other subregions and countries and country-specific training courses to accelerate capacity-building in malaria M&E by expanding attendance by local participants. The following participant comment makes the point:

> *This course is very important, but its financial burden on individuals who want to participate is a hell, because it is hard to get sponsorship when working in a government sectors; meanwhile, knowledge from the course would actually promote performance.*

Some former participants also recommended establishment of a longer training course that leads to an accredited diploma, ideally in partnership with local academic institutions.

4.2 Summary of Survey Results from Supervisors

The survey elicited responses from participants' supervisors at a rate of approximately 50 percent of the number invited to participate (Table 9). The supervisors mostly represented NGOs or development agencies, one from the private sector and seven from government, including three NMCP managers.

Table 9: Survey response rate among supervisors

	Training program or region		
	Anglophone	**Francophone**	**Overall**
Invited to participate	20	21	41
Opted out	1	0	1
Participated in the survey	10	10	20
Response rate	50.0%	47.6%	48.8%

Overall, supervisors responded that the training course was beneficial for trainees and their organizations (Table 10). Supervisors noted improvement in participants' understanding of performance monitoring; improved contribution to M&E activities, including malaria indicators surveys; usefulness of indicators for malaria control; selection of quality indicators in relation to the intensity of malaria transmission; and improved understanding of M&E concepts and tools. The supervisors' ratings also reflect their better understanding of malaria epidemic surveillance systems and the value of participants' inputs in the planning of activities and support for health facilities on M&E-related activities.

Supervisors reported benefits to the organization through better coordination of M&E activities and tracking performance indicators, improved productivity, achievement of institutional targets, and overall improvement of institutional capacity. The following statement from one supervisor illustrates the responses:

> *The program has readily available human resource for surveys. No need for hiring out or sourcing technical assistance from outside the program.*

Supervisors gave other examples of institutional gains, such as better data collection, compilation, and analysis; and appreciation of M&E expertise. These comments are consistent with the high ratings (8.0) supervisors allocated to their organizations' current M&E capacity (Table 10).

Table 10: Supervisors' ratings on course benefits to participants and their organizations

	Anglophone			Francophone		
	Mean	**Median**	**(Min, max)**	**Mean**	**Median**	**(Min, max)**
Benefit to participants	8.50	9	(6, 10)	8.20	8.5	(5, 10)
Benefit to the organization	8.50	9	(5, 10)	8.50	8	(8, 10)
Organization's M&E capacity rating after workshop participation	8.00	8.5	(5, 10)	6.80	8.5	(1, 9)

A high (90%) proportion of supervisors (Table 11) of Anglophone and Francophone participants confirmed that participants were able to implement knowledge and skills acquired in the workshops to accomplish their M&E duties. Supervisors reported that some participants used the knowledge gained to develop an M&E plan as part of the Global Fund Round 9 grant application to develop a national strategic plan or revise an existing M&E plan. Supervisors cited these other areas where participants have applied their knowledge and skills: operational research on the uptake of rapid diagnostic tests in the community, malaria indicator surveys, malaria epidemic surveillance, malaria commodities management, and data quality assessment at lower health care levels. They also cited setting performance objectives, effective monitoring of performance frameworks, data collection and analysis, presentation of results, and mentoring malaria county teams in developing M&E plans.

One supervisor stated:

> *The training has helped in setting up a database, and in drafting the monitoring and evaluation plan of the program; and we collected most of the indicators we currently use for tracking our activities.*

Supervisors reported (Table 11) changes in their organizations' M&E system after participants returned from training (Anglophone, 80%; Francophone, 80%). The areas where supervisors reported improvements were in the collection of denominators for various indicators, renewed focus on data quality and availability, evidence-based decision making, improvements in data presentation, improvements in survey data analysis and interpretation; and in the tracking of malaria indicators.

One supervisor who reported no change in the M&E for the organization made the following comment:

> *The organization has no fund for collection of household data and the organization has not profited from any further analysis of existing data to get more information…..*

Another supervisor mentioned the lack of trainees in the organization as a reason for responding that the organization had no change in M&E after the training. Another supervisor explained that the size and structure of the M&E system is less likely to show noticeable changes after the training of one or only a few individuals out of many M&E personnel or that training was received too recently to make a fair assessment of changes.

Table 11: Supervisors' responses to questions on the usefulness of the workshop training

	Anglophone *n*=10	Francophone *n*=10	Overall *n*=20
	%	%	%
Did participants use knowledge gained to execute M&E activities?			
Yes	90	90	90
No	0	0	0
Don't know	10	10	10
Was there a change in your organization M&E system after participating in training?			
Yes	80	80	80
No	10	10	10
Don't know	10	10	10
Does your organization still have gaps in M&E capacity?			
Yes	90	80	85
No	10	20	15
Don't know	0	0	0
Would you recommend the course to other M&E professionals or offer them support to take the course?			
Yes	100	100	100
No	0	0	0
Don't know	0	0	0

Only three supervisors, one Anglophone and two Francophone, estimated their organizations had no institutional capacity gaps; however, most supervisors said that their M&E systems would benefit from further support in the following areas:

- Data analysis, presentation, interpretation, and use
- Acquisition of data analysis software
- Survey design

- Packaging information for various audiences
- Report writing

One supervisor made the following comment on the need to increase the number of trainees:

> *More training is needed, now that we have adopted a devolved system of government with 47 counties each demanding for an officer familiar to M&E for purse funding.*

All Anglophone and Francophone supervisors said that they would recommend the course to other M&E professionals or support other candidates to attend future malaria M&E training courses (Table 11). Two supervisors were fully satisfied with the current course content; the remaining supervisors recommended adding the following topics or re-enforcement of existing courses to help meet existing M&E capacity gaps:

- Advanced Excel course
- Application of data analysis in refining programs
- Survey design and planning (protocol development, sampling, data analysis using several software programs)
- Developing M&E databases (including Access) with Visual basic or JAVA interface
- Data presentation, including how to package information for various audiences, data use and drawing of inferences, report writing
- Data quality
- Project and program planning
- Geographic information system

Supervisors also offered other suggestions (Tables 12 and 13). Former workshop participants who received promotions in supervisory responsibilities after receiving the training also mentioned some of these suggestions.

Table 12: Supervisors' suggestions for increasing or improving the funding of the program

Anglophone	Francophone
• Customize the curriculum to different country contexts to expand coverage.	• Explore other sources of funding, including the Global Fund, DFID, NGO, the private sector, and government to support the program.
• Organize training in each region of Africa to increase participation and reduce costs.	• Discuss with other agencies, such as the Global Fund, to integrate the M&E capacity strengthening budget with funds allocated to countries.
• Increase the number of trainings to enable more in-country M&E officers in NMCPs and other USAID program implementing organizations to acquire the needed M&E expertise.	• Encourage local authorities to advocate resource mobilization to support the training of NMCP staff.
• Extend training to county health workers.	----

Table 13: Other recommendations and comments by the supervisors

Anglophone	Francophone
• Consider rotating training venues among participating countries.	• Provide a framework for post-training follow-up with the possibility to continue training online.
• Start a center in Nigeria. The need is enormous.	• Organize training at country level to increase participation.
• Discussions should focus more on local challenges and sharing of ideas on how to overcome locally specific M&E challenges.	• Develop the evaluation module with more advanced notions on surveys.
• Review the individual participants' in-country M&E situation and ways to improve it.	• Add a module on database development.
• Strengthen collection of routine malaria data and focus more on monitoring and surveillance data.	• Add more practical exercises to M&E plan development and framework modules.
• Organizers should bear the total cost for the training to include more participants and increase the period for effective coverage.	• Improve course advertisement.
• Make the course totally free of cost to allow for more participants.	• Offer scholarships to participants of in-person training for further training.

4.3 Summary of Stakeholders' In-depth Interviews

As part of the survey, MEASURE Evaluation interviewed five stakeholders to understand how they have contributed to the regional M&E training program and whether their expectations were met, to identify training gaps, and to get recommendations on how the training program can be improved in course content and financial investment.

MEASURE Evaluation identified 19 candidate stakeholders in Benin (1), Burkina Faso (2), Burundi (1), Cameroun (1), Cote d'Ivoire (1), Democratic Republic of Congo (DRC) (2), Ghana (2), Madagascar (1), Malawi (1), Mali (1), Nigeria (1), Rwanda (1), Sierra Leone (1), and in the United States (3). These stakeholders, mostly from USAID missions, PMI, and Plan International, were invited to participate. Information on the survey and request for agreement to participate were sent to all participants. Stakeholders received at least three reminders about the survey; those who did not respond were not included in the survey.

Eight of the targeted stakeholders never responded, four stakeholders indicated that they were not familiar enough with the program or have not been involved in the last two to four years, and two agreed to respond to the questions in writing, but never sent the questionnaire back. Only five (22%) stakeholders participated: two Francophone (both from DRC) and three Anglophone (Ghana, Nigeria, and United States); these include two stakeholders who currently work for USAID. Three stakeholders responded to the questions in writing because of time constraints; two stakeholders were interviewed by telephone or Skype.

In the view of two stakeholders, the training program is in line with recommendations from RBM Partnership, and therefore represents an excellent opportunity to strengthen human capacity, especially among personnel working for governments in malaria endemic countries to generate quality information for better malaria control. There was a need to support M&E professionals to attend the course to improve malaria M&E knowledge and skills, including use of standard malaria indicators to progress in malaria control. In the light of the gaps in malaria M&E capacity, the training curriculum was considered more appropriate to address key M&E issues, especially since

MEASURE Evaluation has a history of developing M&E training courses. One stakeholder indicated the need to get the government to commit more to malaria M&E activities, because malaria data was scanty for any meaningful measurement of malaria burden and the effects of malaria interventions.

Three stakeholders appreciated that their expectations were met to a large extent, as there was evidence of great improvement of knowledge and skills sets, which translated into better ability to execute M&E-related activities. While the outcomes of this assessment will be essential to some stakeholders to determine if their expectations have been met, the successful collaboration between MEASURE Evaluation and local training partners in Ghana and Burkina Faso to drive the program since 2010 is seen as a positive point.

However, one stakeholder acknowledged that improvements in knowledge and skills sets cannot be generalized to all participants who attend the training, and gave a low rating (3 on a scale of 1 to 10) to the question on whether the training met their expectations. The stakeholder explained the rating by making the following comment:

> *…my thinking is that after the training the participants will be a little bit more aggressive in ensuring that they get data on malaria, either from the routine health service data or by doing small evaluation themselves or looking into partners for support to be able to get the information on malaria in their district or state, but this not happening….I have not seen appreciable increase in their commitment to M&E program.*

The stakeholder felt that the program was more focused on surveys and measurement of outcomes, which they have less control of; however, the stakeholder acknowledged that local health authorities, including the NMCP, have some responsibility for the situation, especially given that the last batch of trainees were transferred out of the M&E department a few months after attending the training course.

The other stakeholders agreed that supporting participants to attend the course was worth the investment and that post-training support would further improve the return on investment, as such an approach would be suited for addressing practical country and field-specific M&E issues. Three stakeholders are strongly in favor of supporting future training programs, while one stakeholder would like to reassess the current needs in M&E capacity before committing to support additional participants.

In light of the rapidly changing landscape of malaria epidemiology and control, one stakeholder raised questions on whether the current model and content of the training program should be pursued. The stakeholders suggested that the training curriculum needs updating to address M&E specifics for malaria pre-elimination or elimination, including malaria surveillance, relevant indicators, and how key indicators can be monitored over time. This reinforces the view that the malaria M&E training curriculum should be updated and tailored to cover country-specific needs.

Stakeholders identified the following gaps in the current training program:

- Lack of hands-on skills for the analysis of DHS and routine health data
- Lack of specific training to address ongoing innovations and changes in M&E and the health management information system (HMIS), including DHIS 2.0 and performance-monitoring frameworks as revised by funding agencies

- The lack of post-training support and difficulties in getting trainees involved in all relevant M&E activities

Recommendations for the Future Training Program

- Update the program to cover surveillance and key indicators for malaria pre-elimination and elimination and better address country-specific needs.
- Sustain and expand the program to other countries with support from countries who have been hosting the training program to foster south-south collaboration.
- Establish a well-structured post-training follow-up plan with onsite and remote support components.
- Place more emphasis on routine health information data and small scale malaria M&E activities to address districts or state-specific malaria information needs. For instance, there should be a quick way to get data on some malaria indicators that do not require large and costly surveys.
- Introduce more practical modules tailored to address each participant's needs.
- Introduce a module on how to generate data to inform programming using secondary data analysis.
- Introduce (or strengthen) a module on impact evaluation
- Invest effort on how to use and communicate malaria information (communication management).
- Introduce a training program focused on the district level with the possibility of sharing experiences between the different actors and facilitation by former trainees.
- Review the module on field work and identify the best way this component of the training can be beneficial to participants, given that M&E capacity is not good enough to identify ideal sites for fieldwork.
- Ensure that those who work in M&E are identified to attend the course.
- Partner with local training schools for long-term training to increase country M&E capacity.

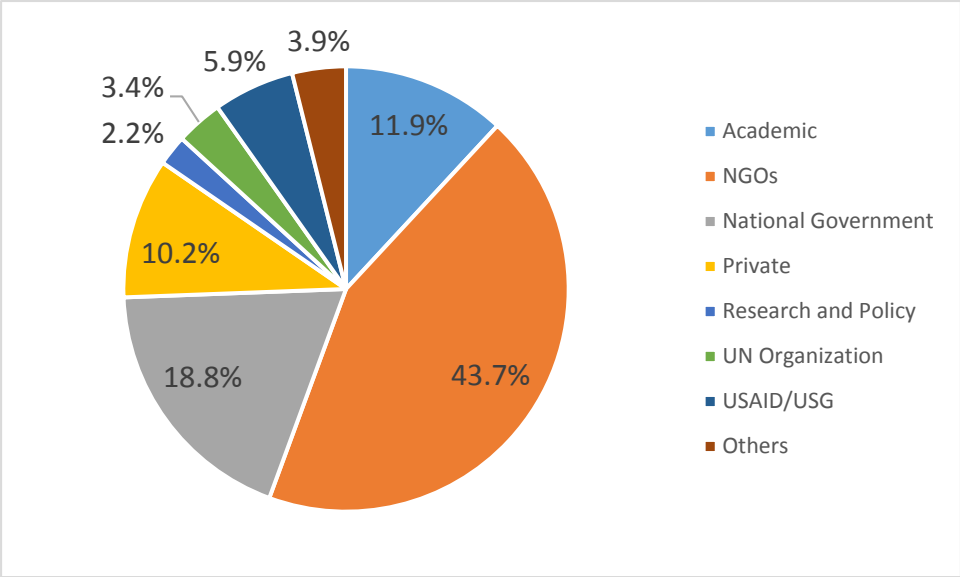
5. ONLINE TRAINING COURSE EVALUATION

5.1 Students' Online Course Evaluation: Students Who Completed the Course

5.1.1 Characteristics of Students Who Completed the Online Course

After exclusion of duplicate registrations, a total of 530 participants were considered for data analysis. Of the 432 participants who provided information about their gender, 17.8 percent (n=77) were female and 82.2 percent (n=355) were male. Most participants (Figure 5) were affiliated with NGOs (47.3%) and national governments (18.8%). Surveyed participants working with academic institutions and with the private sector accounted for 11.9 percent and 10.2 percent, respectively, while only 5.9 percent came from USAID/U.S. Government (USG) and 3.4 percent from United Nations organizations. Smaller fractions of participants were either from research and policy organizations (2.2%) or other institutions (3.9%).

Figure 5: Distribution of students who completed the online course, by organization type



Users of the online course mostly learned about the course from MEASURE Evaluation's website or from their colleagues, while list-serves, MEASURE Evaluation staff members, and MEASURE Evaluation workshops contributed relatively less in informing users about the online course.

5.1.2 Perception of the Online Course Content

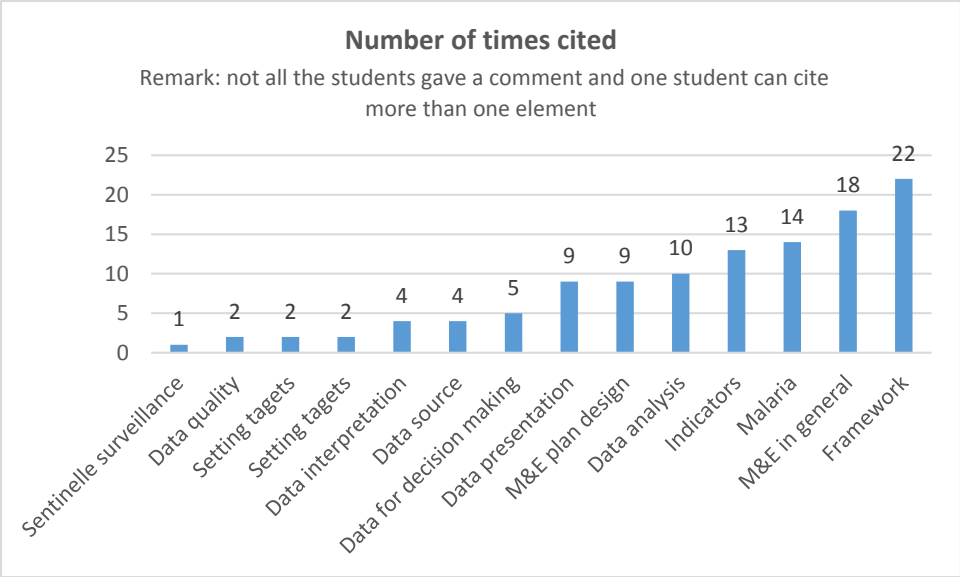
Nearly all participants (99.4%; 527) reported that the content of the online course met their expectations. Reasons for expectations not being met include responses that the course was found to be too focused on malaria, the user did not have good knowledge about malaria, or the course (including the evaluation exam) was hard to grasp.

Of the participants who provided relevant information on why the content of the course met their expectations, many stated that they were able to learn and improve their knowledge and skills on malaria M&E and understand the relevance of M&E for projects, programs, and research. Gains in knowledge about malaria transmission, epidemiology, and control were mentioned several times to explain why users' expectations were met. The course content was also found to be comprehensive and useful.

5.1.3 New Information or Skills Acquired by Students

A large number of students reported not having had previous knowledge or skills about M&E in general, M&E frameworks, malaria, M&E indicators, M&E plan design, or data analysis before taking the online course (Figure 6). New information learned about malaria (third most-cited topic) relates to information on malaria transmission, malaria burden, and malaria interventions (including prevention and treatment). Other new topics reported by students covered data presentation, use of data for decision making, data interpretation, and malaria data sources.

Figure 6: New information or skills learned by students after taking the online course



5.1.4 Relevance of the Course Topic to Users' Jobs or Professional Activities

Students were asked about the relevance of the topics covered in the course to their job or professional activities. The majority (93.8%; 497/530) acknowledged that the course content was relevant for carrying out their professional activities. Students provided a wide range of explanations on how knowledge gained after taking the course might contribute to their work. Apart from application to their current or future projects, programs, ongoing M&E, research, and academic activities, or to other disease areas to improve overall performance, participants aim to use knowledge gained to improve key areas of their M&E systems. These include setting SMART objectives, selecting quality indicators, and improving data quality, analysis, and use for decision making to effectively monitor and evaluate health programs. Knowledge gained will also contribute to the academic training of students and the training of program staff.

A small fraction of participants (6.2%; 33/530) reported that the course content was not relevant for their current duties, mainly because they did not have M&E jobs or were not currently employed, or they were working on other diseases than malaria (human immunodeficiency virus [HIV] and tuberculosis) or other program areas, including environment and engineering. Some of these users were students who took the course for their school assignments. However, a number of these participants believed the knowledge and skills could be applicable to their activities or useful to their future jobs, as illustrated by the following quotations:

> *This does not apply to my current position, but I want to transition into a career more focused on monitoring and evaluation of malaria and so this is appropriate for my future research and work*

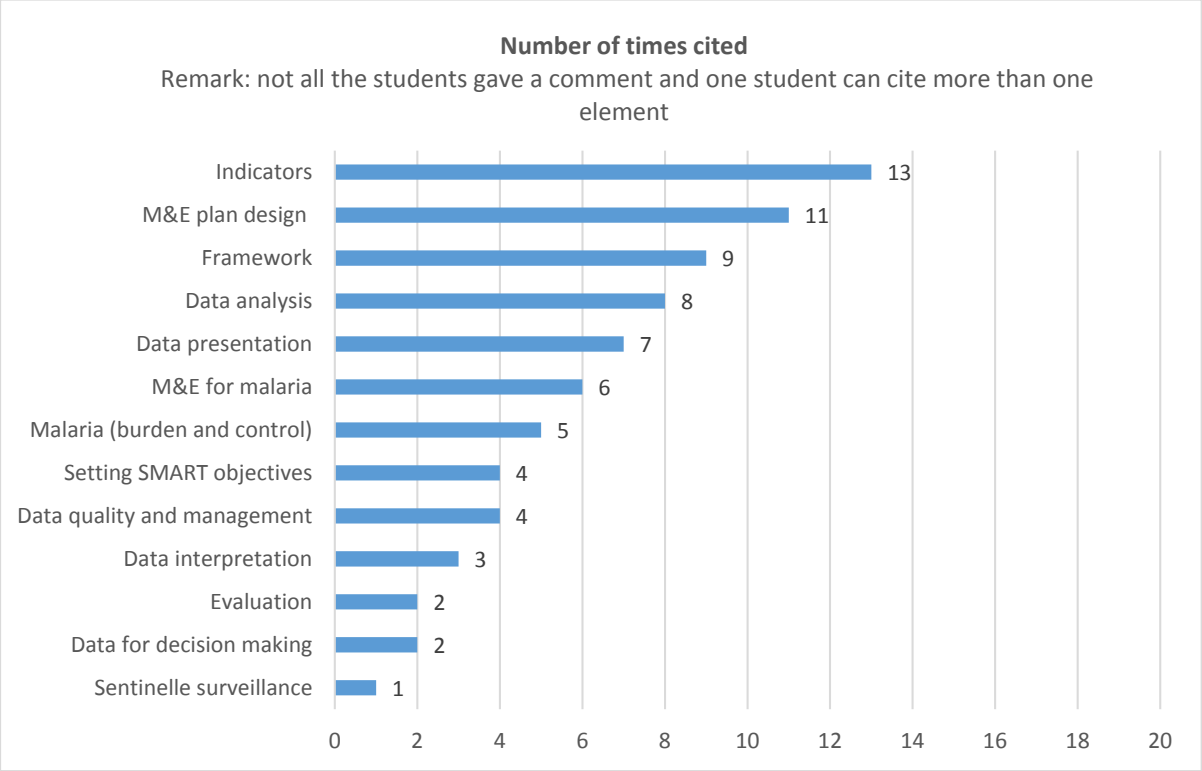
> *It is not relevant to my job. I took this course to expand my knowledge and achieve a certificate from USAID.*

5.1.5 Application of the Knowledge and Skills Gained in Their Work

Students most commonly reported that they expect to use the knowledge and skills gained related to the definition and selection of indicators, M&E plan design, M&E frameworks, and data analysis in

their work (Figure 7). Other topic areas reported to be likely used in their work included information on data presentation, malaria specific M&E and malaria burden, transmission, and control.

Figure 7: Information or skills gained that participants expect to use in their current jobs



When asked if they would use material learned for their jobs or professional activities, 97.2 percent (*n*=515) of students who completed the course gave a positive response.

5.1.6 Assessment of the Online Course User Interface

Nearly all (97.5%; *n*=517/530) students who completed the course found navigating the site user-friendly. There was no report of confusing elements on the user interface. Of students (*n*=44) who made suggestions for improving the user interface, more than one third (36.3%) expressed the need to make electronic, printable PDF copies of course material available for offline reading, especially for those who do not have good Internet connectivity. About 16 percent experienced trouble opening or accessing graphics, while a few other students reported various issues with navigation through the course (e.g., it takes time to move on to the next page in the course, difficulty with the "Finish button" or the system repeatedly returning back to the start section before the end of the session). Three students who answered "no" to the question on whether the interface was user-friendly, commented:

> *Improve the link.*
>
> *I felt tempted to click the 'finish' button after every assessment which sent me away from the course then I'd have to return and figure out where I had last been in the course.*
>
> *It takes too much time to open some graphics.*

Some students also noted a few suggestions for improving the course user interface, such as showing how to send feedback to the course instructors and adding in video or audio options to the course as well as directional keys to improve navigation.

5.2 Students' Online Course Evaluation: Students Who Did Not Complete the Course

5.2.1 Characteristics of Students Who Did Not Complete the Course

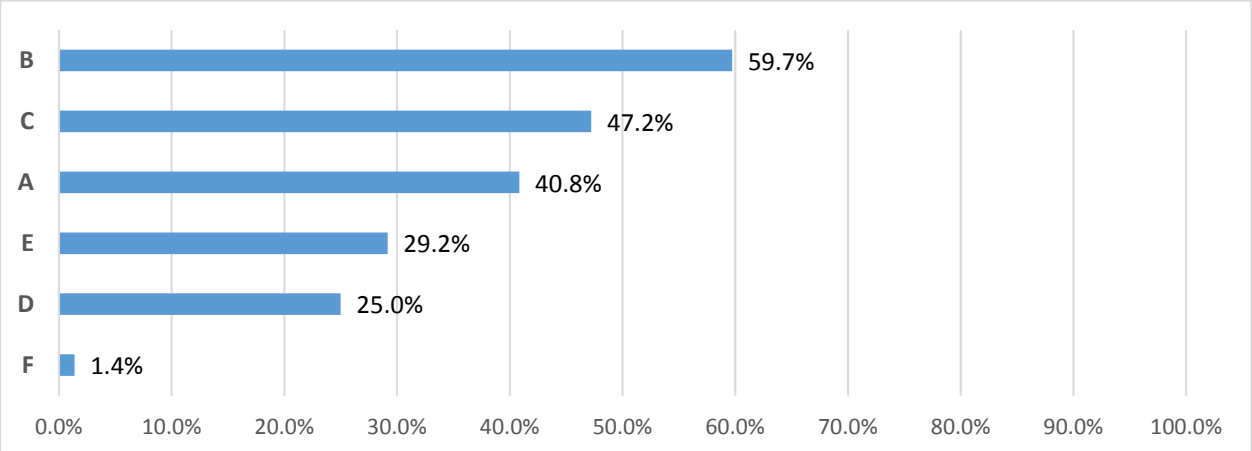
Of those students who did not complete the online training course, 295 were invited to participate in the survey. Overall, the response rate was 24.3 percent for the survey. The average years of experience in M&E reported by students was 4.14 (SD=4.28) years (median 3.25; range 0–29). Forty-three percent (*n*=72) of students reported that they are currently working in the area of malaria.

A high proportion (70.8%) of students reported that they have taken or attended other M&E training courses organized by MEASURE Evaluation or through Global Health (e-learning), John Snow Institute, and other organizations. Popular training courses attended included the M&E fundamentals course organized by MEASURE Evaluation and theme-specific courses covering malaria, HIV and AIDS, tuberculosis, reproductive health or immunization programs, data quality, data demand and use, impact evaluation, and quality management or program management. Just under a third (29%) of students had attended two other M&E courses before or after taking the online course.

Most students reported finding out about the course through the MEASURE Evaluation website (70.8%) or through colleagues at their workplace (20.8%), while a few reported finding out about the course through a MEASURE Evaluation brochure, an M&E listserv, or other source.

The main motivations reported for taking the course were to improve individual M&E capacity (59.7%), improve their organization's M&E capacity (40.8%), and own personal interest in M&E (47.2%) (Figure 8).

Figure 8: Users' main motivation for taking the online course



A: Improve my organization's M&E capacity as it relates to malaria programming**; B:** Improve my own M&E capacity as it relates to malaria programming**; C**: Personal interest in topic area; **D:** Career change/research for a new job**; E:** To effectively interact with M&E staff or consultants**; F:** For background material on an essay assignment on malaria M&E.

5.2.2 Time Spent on the Course

The majority of students who did not complete the course reported spending between one to three hours (41.1%), while 23.3 percent reported spending four to six hours on the course (23.3%) and 19.6 percent reported spending more than six hours on the course. Only 16 percent spent less than one hour on the course.

5.2.3 Reasons for Not Completing the Review of Course Material

The course material was fully reviewed by 39 percent (*n*=27/69) of students. Among those who fully reviewed the course material, a higher proportion reviewed the following modules: Overview of Malaria, Using Data for Decision for Decision Making, and Introduction to Monitoring and Evaluation, which reflects the chronological order of the modules presented in the course (Figure 9). Only seven students reported that they did not review any of the modules.

The main reasons reported for not completing all of the online course modules were issues or difficulties with Internet access or connectivity issues and other conflicting activities (Figure 10). Other reasons mentioned for not completing all the course modules included the lack of course material in PDF formats for offline in-depth reading and learning and travel.

Figure 9: Online course modules completed by students who did not finish the course

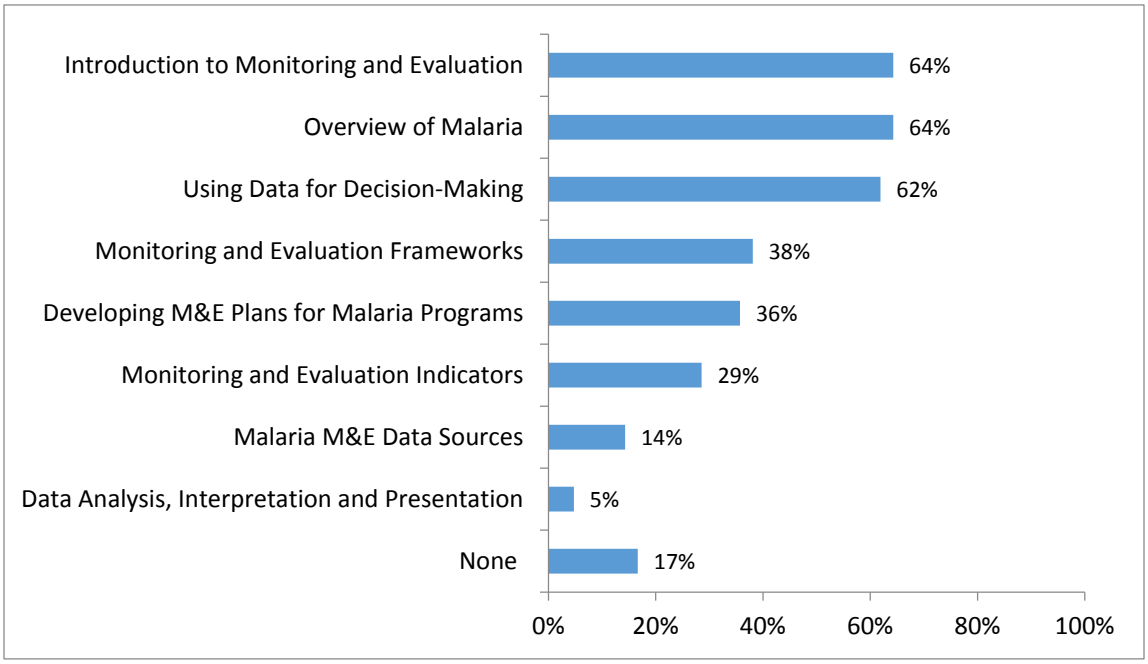
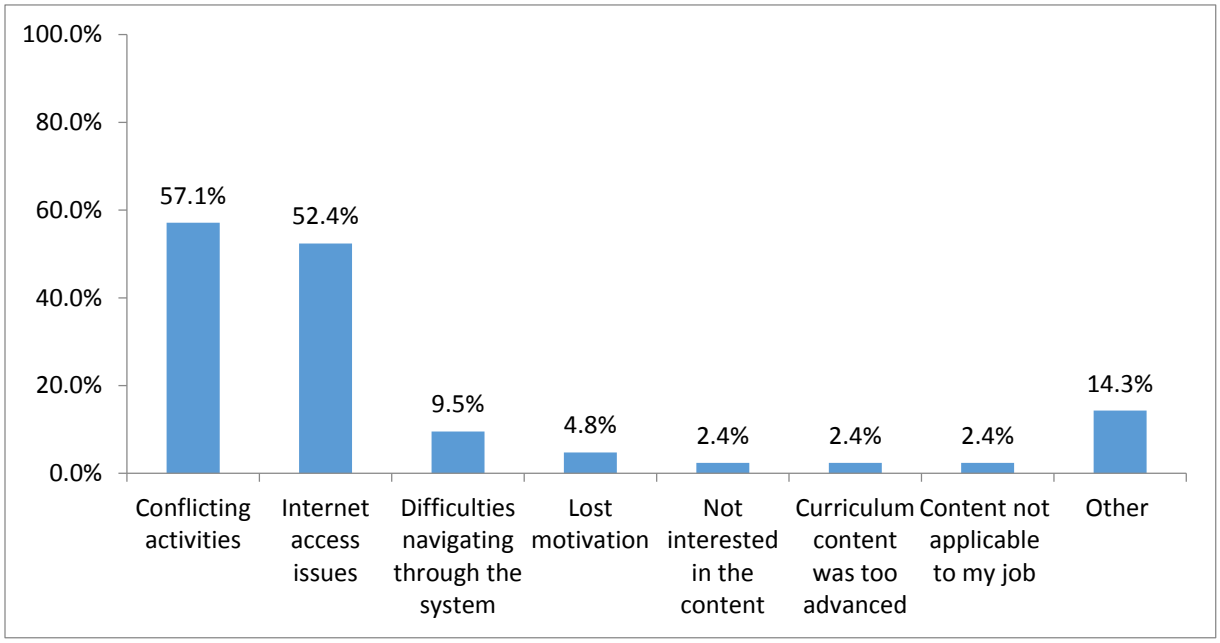


Figure 10: Reasons students gave for not completing all online course modules

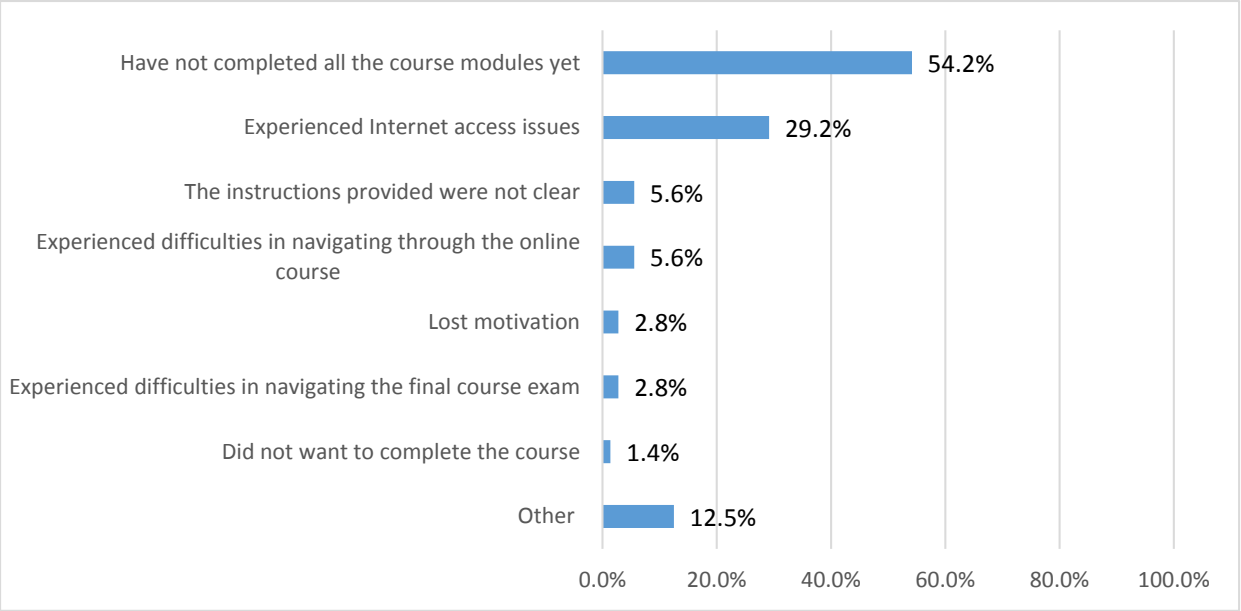


5.2.4 Reasons for Not Taking the Certification Exam

A large number of students reported not taking the end-of-course certification exam, because they had not yet completed reviewing all the course modules (Figure 11). Internet access and connectivity difficulties were the second main reason reported (29.2%). A small proportion of students reported lack of clear instructions (5.6%) and difficulties in navigating the online course (5.6%) or through the final course exam (2.8%) as reasons for not taking the final course exam.

Aside from three individuals who did not provide a response, the majority of students (95.6%; 63/68) reported that they plan to take the certification exam in the future. Those who reported that they did not plan to take the exam cited the following reasons: course content not being of interest or relevant to their job or lack of clear instructions on the course.

Figure 11: Reasons for not taking the final certification exam



5.2.5 Perception of the Online Course Content

Surveyed students were asked to rate the course content on a scale of 1 (poor) to 10 (excellent). The mean score was 7.86 (SD=1.67) and the median score was 8.0 (range 2–10), suggesting that the content was comprehensive and relevant. Only one student gave a score below the average (5.0), and six (9%) out of 67 users rated course content with a score of 5 or less. Course content was found to be comprehensive, useful, and easy to understand and to provide useful and detailed information on malaria by a large number of students: *I found that the content of the course includes the various aspect that a professional working in the M&E field needs to know about the M&E of Malaria Programs.*

On the course in general, one student commented:

> *…especially for some of us who live in countries that do not have institutions that provide such courses as well as for those who cannot afford to pay school fees, as well as the convenience of being able to do it at my own time. This combination makes this platform (MEASURE Evaluation) an excellent initiative.*

Students who gave a lower rating for the course content provided the following reasons for their rating:

> *It provides vital information or basic information on malaria and M&E. It does not bring out the real technical issues of M&E like development of tools*
>
> *It is explanatory enough but too time consuming*
>
> *It needs more practical content.*

5.2.6 Students' Assessment of Course Instructions

Instructions on the online course were rated with a mean score of 7.62 (SD=1.85) and median score of 8 (range 3–10). These scores are close to scores allocated to the course content. Five users (7.5%)

rated course instructions with a score below 5. Instructions were largely found to be clear and easy to follow, and to some extent of good quality (layout), as illustrated by the following statements:

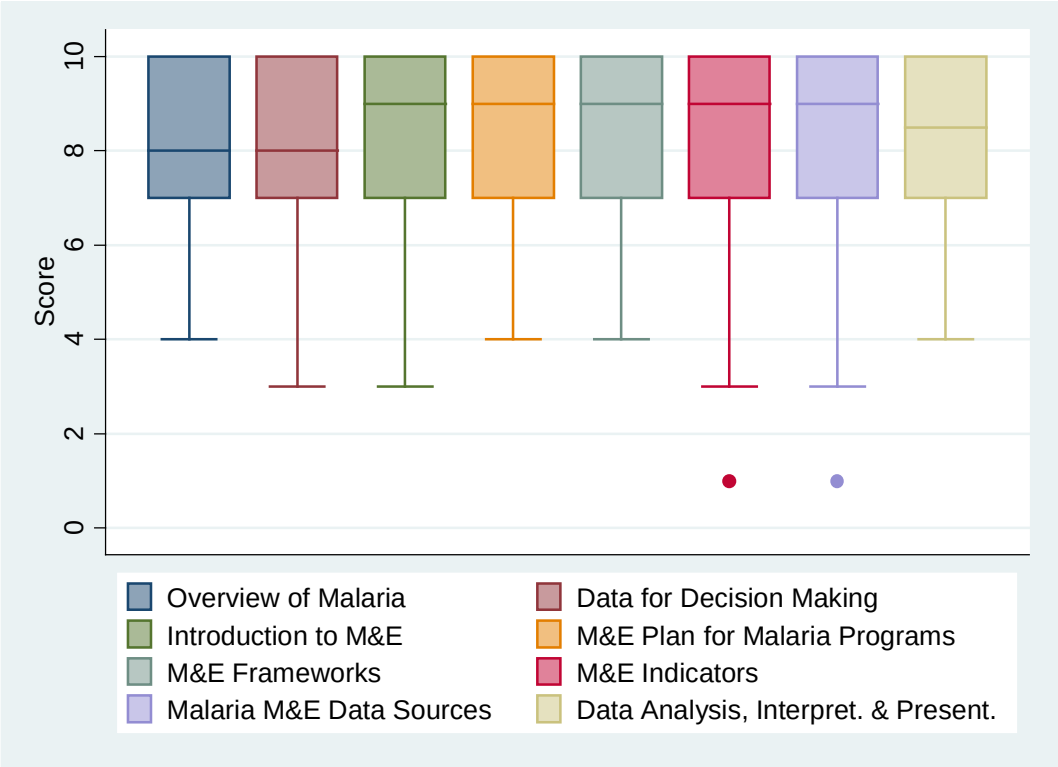
> *The instructions are well structured, organized and the grammar is easy to comprehend.*
>
> *The instructions are clear but still need to be specified or to be put in simple terms.*

It is important to highlight that the explanations supporting the three lowest scores on course instructions relate to Internet access or access to material for offline reading rather than issues directly related to the course instructions.

5.2.7 Students Expectations and Scores on the Course Modules

Most participants (93.9%) reported that their expectations were met. Students allocated an average score of 8 or higher to all course modules, except for the module on Malaria M&E Data Sources, which received a score of 7.83. Distributions of scores by module are presented in Figure 12. The module on Malaria M&E Data Sources received the highest number of scores below 5 (10.8%), followed by the module on M&E Indicators (8.1%). The rest of the modules received less than 5 percent of scores below the average score of 5. One of the three students whose expectations were not met found the course too long while another user declined to continue the course after registering and noticing it did not fit his specific M&E needs.

Figure 12: Students' assessment of the online course modules



Overall, the course material was reported to be relevant to students' professional responsibilities (95.5%) for various reasons, including broadening of malaria-specific M&E knowledge, skills, and

experience, as well as relevance and applicability of knowledge and skills gained to other disease areas or activities.

5.2.8 Application of the Knowledge and Skills Gained in Their Work

Two out of three students (70.8%; 46/65) who did not take the certification exam reported that they were able to apply knowledge and skills learned in their jobs or professional responsibilities.

Students reported different ways that they applied or plan to apply the knowledge and skills learned from the course to their work. These include developing or improving country- or project-specific M&E plans, frameworks, indicators, or surveillance tools; assessing and improving data quality for better decision making; and performing data analysis and mentoring and training staff. These are stated in the following quotations:

> *I've mainstreamed M&E principles into program implementation and based on principles I've developed an SOP [standard operating procedures], checklist to maintain regular conduct of routine assessment throughout the program period.*

> *I introduced a malaria data review meeting at the provincial level and have been able to train more than 150 ministry of health workers on basic M&E skills.*

Participants reported using knowledge on malaria epidemiology and control to support malaria projects or programs, effectively communicate malaria-related information to specific groups, or promote preventive measures. Participants also reported they used knowledge, skills, and M&E tools gained during the course for reproductive health programs and to fight Ebola.

One survey participant made the following comment:

> *The knowledge has helped me in designing M&E plans other than malaria programs, such as menstrual hygiene management, family planning, reproductive health, water, sanitation and hygiene intervention program, M&E frameworks, and indicators.*

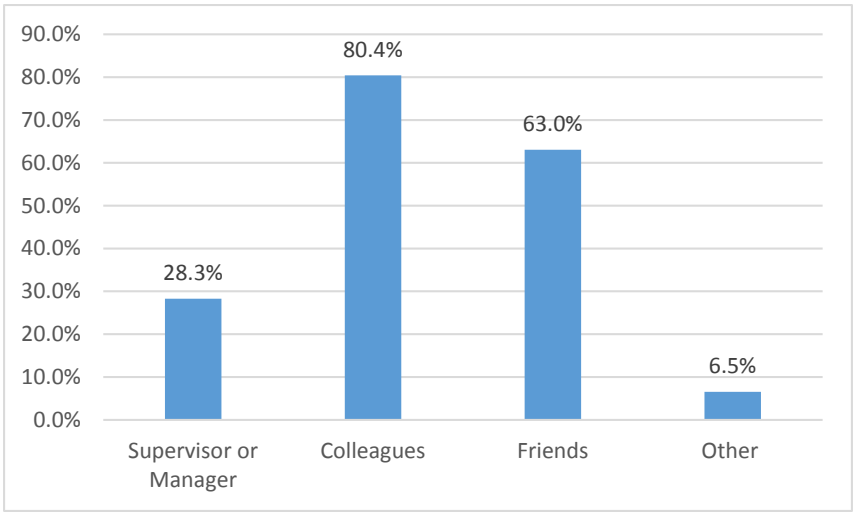
Another participant made this comment:

> *We are currently working on a health promotion project…. We are focused on Ebola prevention. The knowledge gained from the course is been used to improve our intervention in the fight against Ebola.*

Participants reported that the reasons for not being able to apply knowledge and skills gained during the course included a lack of opportunities to do so in their work, because they do not have M&E responsibilities or work in different program areas. Two students indicated that they were not confident enough or had M&E knowledge gaps that affect their ability to apply the knowledge or skills.

When participants were asked if they would recommend the course to other people, including colleagues and friends, 73 percent (n=46/63) replied favorably (Figure 13). Most (80.4%) would recommend the course to their colleagues, about one third (28%) would recommend the course to their supervisor and manager, and a few would recommend the course to a student (6%).

Figure 13: Recommendations to take the course



Participants made the following recommendations for course improvements:

- Incorporate downloadable course material for offline reading to help mitigate Internet connectivity issues or provide a booklet as preparation for the certification exam.
- Translate the online course into French.
- Add samples of M&E plans and reports.
- Use more examples and case studies to improve understanding.
- For users with good Internet connectivity, improve the user interface with the addition of video and audio versions, especially for people who have reading problems.
- Use simple terms for instructions and make the course more interactive.
- Make the course more concise by reducing the number of modules and shorten content.
- Add detailed modules on analysis in settings with poor access to data and modules on common M&E problems.
- Add an application that would automatically remind students to complete the course with a deadline.
- Design a mobile phone application of the course.
- Explore opportunities to support an internship or volunteer positions to help sustain knowledge and skills gained.

5.2.9 Assessment of the Online Course User Interface

The user interface scored 7.65 on average (SD=1.83), with a median of 8.0 (range 3–10). Reasons provided to explain high scores include easiness of navigating through the course or difficulties were not experienced when navigating through the course: "…very easy to find documents and maneuver through the website." Another user who gave a high score commented: "For me, learners need something visually appealing and the colors used are great, easy on the eye. The boxes also used to give more information about a subject are easily navigable." Only 4 (6.0%) students gave a score below 5. Reasons for giving lower scores were supported by difficulties navigating through the

course, which may be associated with Internet connectivity. One participant who gave a score below 5 found the user interface confusing.

6. OVERALL COMMENTS ON THE SURVEYS

Participants in both the in-person and online courses, supervisors, and stakeholders said they appreciate the training. Most survey participants said they are satisfied with the course content, but many suggested additional training focused on specific M&E issues to address specific needs. The potential outcome of this suggestion is to keep the current course as a core training model, on which more specific training modules can be built to further develop other key M&E capacities, which cannot be covered in great detail by the current program. One suggestion, as an example, was for occasional training on data management and data analysis and more regular training, annually or every two years, on the HMIS systems, which might be more relevant for district medical teams, to address specific needs of M&E systems.

The survey indicates that post-training follow-up deserves more attention in the next phase of the training program. The training provides an opportunity to bridge the gap between theoretical training and the practical aspects of malaria M&E in the field. The training also could provide an opportunity to match country-specific M&E capacity needs. One opportunity to explore would be onsite visits or remote support and mentoring through Skype calls with local or international M&E experts to discuss experiences and challenges and explore areas where further support is needed.

The proposed network of M&E trainees, if established, also could play a significant role in supporting post-training activities. Network members could establish a platform to ask questions and request support for M&E activities. The platform would also help participants share experiences and best practices and provide an opportunity for organizations to foster mutual support among M&E professionals in the field at national, regional, and subnational levels. One possibility to explore is for MEASURE Evaluation to collaborate with other partners, including USAID, the Global Fund, and RBM, in posting at least one fully dedicated M&E staff member of the MEASURE Evaluation team in the subregion to run the program; engage in regular discussions with all key stakeholders, including local authorities and academic organizations, for advocacy and sustainability of the program; and contribute mentoring and post-training follow-up for M&E trainees.

To accelerate impact at the national level, further training in country-specific content and M&E capacity is needed, because the countries that the program covers are at different stages of malaria control, which means they need varying levels of M&E as some countries are in the pre-elimination or elimination phase, needing strong malaria surveillance systems and appropriate indicators to monitor progress. This would requires an updated curriculum and additional efforts to reach out to regional and district M&E personnel who play key roles in national M&E systems. These people also may have limited resources to access current training programs, as demonstrated by the number of participants who needed sponsorship from national institutions to attend the in-person training courses. With an improved online training program and improved Internet connectivity, especially at subnational levels where coverage is poor, the reach of the program could be expanded.

The online course should be translated into other major languages, especially French, to broaden access. The online training course could also benefit from access through mobile phone technology to increase participation and mitigate travel burden and costs. The online course is a prerequisite for the regional training course; however, participants may not be aware of this requirement for the regional training course. Additional advertising that uses expert communication strategies could promote the online and in-person training courses.

This evaluation may have been influenced by selection bias, because survey respondents were users or participants who were more interested in the program or happier with the program, and they may have tended to provide positive feedback on questions about the quality of the training. Most participants in the in-person workshops were sponsored by USAID through MEASURE Evaluation, and they may have built relationships with MEASURE Evaluation staff that could influence their opinions about the program. Also, only a few stakeholders were available for in-depth interviews, and, of those who agreed to participate, only two were available, which is not ideal for information gathering, and may have limited the contribution of stakeholders. It should, however, be noted that participant, supervisor, and stakeholder comments were consistent about the need for expanding the program and meeting additional M&E gaps.

7. RECOMMENDATIONS

Overall, participants greatly appreciated the regional workshops and online training, especially course content comprehensiveness, usefulness, and diversity. Following is a summary of key recommendations for improvements in future training programs:

- The course would benefit from a post-training follow-up program with onsite visits or remote support to bridge the gap between theoretical training and field- or country-specific reality. Refresher training online training or at periodic conferences would provide an opportunity to discuss key findings and emerging M&E issues.
- The course curriculum needs to be updated to address surveillance and key indicators that are relevant for malaria pre-elimination and elimination circumstances. More specific training should be designed to address data collection and data quality and data management and analysis, including analysis of routine health system data and the growing need to use DHIS 2.0.
- The course needs to be more accessible to more M&E personnel. One way to do this would be to revise or remove the costs for the in-person training course. Further partnerships should be built, in collaboration with academic organizations and funding agencies, to expand the in-person training venues to other subregions or countries in SSA.
- The number of training sessions should be increased, the course duration revised, and the possibility for an accredited certificate or diploma should be explored, in collaboration with regional or local academic organizations.
- The online course should provide downloadable and printable course materials for offline reading to mitigate Internet connectivity difficulties in developing countries. The material should take Internet connectivity into consideration through the use of low-resolution graphics and improved instructions.
- The malaria M&E course needs increased visibility, which can be accomplished with better advertising that uses the advice of communication experts and other relevant experts.

- A network of workshop and online training alumni could be formed to add value and strengthen malaria M&E capacity that would contribute to the post-training follow-up.

APPENDICES

Appendix A: Questionnaire for Anglophone Participants in the Regional M&E Workshops

SURVEY QUESTIONNAIRE FOR ANGLOPHONE PARTICIPANTS IN REGIONAL TRAINING WORKSHOPS*

MEASURE Evaluation launched the regional malaria M&E training courses in 2010. This questionnaire is addressed to participants who completed the in-person training course to assess if knowledge and skills have been retained and used, and to identify areas for course improvement.

SECTION 1: Background information

1.11 Participant's name: _____

1.12 Current position: _____

1.13 M&E job responsibilities in your current position: _____

1.14 Number of years of M&E experience: _____

1.15 Year of MEASURE Evaluation's M&E training attended: _____

1.16 Source of funding for M&E training attended: _____

1.17 Have you attended or taken any other M&E training courses? ○ Yes ○ No

Please list all of the other M&E courses you have taken (this includes other MEASURE Evaluation M&E courses or other non-MEASURE Evaluation courses):

Course attended 1: _____ Year 1_____

Course attended 2: _____ Year 2_____

Course attended 3: _____ Year 3_____

Course attended 4: _____ Year 4_____

Course attended 5: _____ Year 5_____

SECTION 2: Evaluation of knowledge and skills retained

Please answers the following questions by ticking in the right box or boxes or writing the appropriate response/comment in the space reserved.

2.1 True or False: Monitoring involves attributing program outcomes to their causes.

a. True
b. False

2.2 In the decision-making process, which of the following is/are NOT true?

a. It is only evidence-based information that affects decision making.
b. Different decision makers need different information to make decisions.
c. Decision makers are high powered individuals with influence over others.
d. Monitoring and evaluation should play a major role in the public health decision-making process.

2.3 Name three components/elements of an M&E plan:

1. _____
2. _____
3. _____

2.4 What is a logical framework?

a. A diagram that identifies and illustrates the linear relationships flowing from program inputs, processes, outputs, outcomes and impacts.
b. A table which presents a standardized summary of the project and its logic.
c. It is a diagram that identifies steps or levels of results and illustrates the causal relationships linking all levels of a program's objectives.
d. A diagram that identifies and illustrates the relationships between all relevant systemic, organizational, individual, or other salient factors that may influence program/project operation and the successful achievement of program or project goals.

2.5 Name two dimensions/components of data quality:

1. _____
2. _____

2.6 Which of the following are true?

a. In undertaking surveillance, there is the need to analyze the data in a timely fashion.
b. Surveillance gives the same information as surveys.
c. Data from surveillance is usually from a randomized sample.
d. Surveillance data is representative of the underlying population.
e. Surveillance data can be easily generalized to the larger population.

2.7 Which of the following evaluation impact design is most appropriate/strongest for attributing causality (attribute change in outcome of interest to the intervention)?

a. Experimental design
b. Quasi experimental design
c. Non-experimental design

2.8 In which situation should you use sentinel rather than the routine health information system?

a. When you need to save money by having fewer sites to maintain
b. When you need quarterly data
c. When you need information that is representative of the population
d. When you need high quality data to monitor trends in mortality

2.9 Which of the following tools can be used to assess data flow?

a. Assessment of Data Use Constraints
b. Prism Tools
c. Information Use Mapping
d. MESST

2.10 Name two characteristics of a good indicator:

1. _____

2. _____

SECTION 3: Implementation of knowledge and skills, behavior change, and training gaps

3.1 Are you currently involved in M&E activities? ○ Yes ○ No

a. If no, please explain why not:

_____

3.2 Please rate from 1 to 10 (1 not at all to 10 greatly) the extent to which you were able to implement knowledge and skills learnt from malaria M&E training course. *Please circle or tick your answer.*

Not at all → Greatly									
1	2	3	4	5	6	7	8	9	10

3.3 Please rate 1 to 10 (1 not at all to 10 greatly) to what extent you have applied knowledge and skills learnt from the following training modules to carry out your work. *Please tick the correct box for each row.*

	Not at all → Greatly									
	1	2	3	4	5	6	7	8	9	10
Malaria in SSA										
M&E concepts										
Using data in decision making										
Developing an M&E plan										
Frameworks										
Indicators										
Calculating & interpreting indicators										
Data sources										
Surveys										
Routine health information system										
Sentinel surveillance sites										
Demographic health surveillance system										
Evaluation Methods										
Budgeting an M&E plan										
Data management, analysis, & quality										
Presentation of data: demand & utilization										

Comments:

_____

_____

_____

3.4 Were you able to introduce changes or new ideas in your work after participating in the M&E training course? *Please tick relevant option.* ○ Yes ○ No

a. If "yes," please provide at least one concrete example of change or new idea you have introduced in your work after participating in the training course.

_____

_____

b. If "no," please give at least one reason why you have not introduced changes or new ideas to your M&E work.

_____

_____

3.5 After the training course, have you…? *Please tick all relevant boxes.*

a. Recommended the course to colleagues/others
b. Shared the training materials
c. Trained colleagues/collaborators
d. Provided support to other organizations in M&E related activities
e. None of these
f. Other. *Fill in the blank:*_____

3.6 Have you used the training materials since you returned from the training course (answer by yes or no)? *Please tick the relevant option.* ○ Yes ○ No

a. If "yes," please provide at least one concrete example of what you used the material for:

_____

_____

b. If "no," explain why not:

_____

_____

3.7 Was there any change in the way your supervisor perceived/supported M&E activities after you attended the training course? ○ Yes ○ No ○ Don't know

a. If "yes," please provide example of what has changed:

_____

_____

b. If "no" or "don't know," please try to explain:

_____

_____

3.8 Have you been promoted to a new position or given more M&E responsibilities since you returned from training course? ○ Yes ○ No

a. If "yes," please give the position you have been promoted to.

_____

3.9 How do you rate (1 not at all to 10 greatly) your current knowledge and skills on the following M&E subjects? *Please tick the correct box for each row.*

	Poor → Excellent									
	1	2	3	4	5	6	7	8	9	10
Malaria in SSA										
M&E concepts										
Using data in decision making										
Developing an M&E plan										
Frameworks										
Indicators										
Calculating & interpreting indicators										
Data sources										
Surveys										
Routine health information system										
Sentinel surveillance sites										
Demographic health surveillance system										
Evaluation Methods										
Budgeting an M&E Plan										
Data management, analysis, & quality										
Presentation of data: demand & utilization										

Comments on knowledge and skills rating, if any:

_____

_____

3.10 Overall how do you rate (1 poor to 10 excellent) your organization's M&E systems before and after you attended the training course? *Please circle your answer.*

	Poor → Excellent									
	1	2	3	4	5	6	7	8	9	10
Before										
After										

Comments on organizational M&E systems rating:

_____

_____

3.11 What kind of follow up support/training would help you do your work better?

_____

_____

3.12 If you could recommend a new module for the training course, what would it be?

_____

_____

3.13 USAID's President's Malaria Initiative (PMI) has invested in these regional M&E malaria training courses since 2010. What are your suggestions to expand/improve their investment?

_____

_____

3.14 Please provide any improvements/recommendations/comments that could further improve the training course.

_____

_____

Thank you for participating in the survey.

Appendix B. Questionnaire for Anglophone Supervisors of Participants in Regional M&E Workshops

SURVEY QUESTIONNAIRE FOR SUPERVISORS OF PARTICIPANTS IN THE REGIONAL TRAINING WORKSHOPS*

MEASURE Evaluation has launched a regional malaria M&E training course in 2010 this questionnaire is addressed to supervisors (NMCP managers or referees) of participants to the Anglophone regional training workshops to assess the effectiveness of the program and identify areas of improvement.

1. **Institution:** _____

2. **Please tick at least one box, if you have one of these responsibilities.**

Supervisor	NMCP manager	Stakeholder representative

3. **How many people attended M&E training in your organization since the launch of the program?** _____

4. **Was course was beneficial to the trainees?** ○ Yes ○ No ○ Don't know
   a. If yes, please rate to what extent the course was beneficial to the trainees.

Not at all → Greatly									
1	2	3	4	5	6	7	8	9	10

   b. If "no" or "don't know," please explain.

_____

_____

5. **Was the course beneficial to your organization?** ○ Yes ○ No ○ Don't know
   a. If "yes," please rate to what extent the course was beneficial your organization.

Not at all → Greatly									
1	2	3	4	5	6	7	8	9	10

   b. If "no" or "don't know," please explain.

_____

_____

_____

In your opinion, did the trainees apply knowledge and skills learnt to carry out their M&E duties? ○ Yes ○ No ○ Don't know

a. If "yes," please give at least one concrete example of implementation of knowledge and skills learnt.

_____

_____

b. If "no" or "Don't know," please explain.

_____

_____

6. **In your opinion has any change occurred in organization's M&E system after the trainee (s) attended the course?** ○ Yes ○ No ○ Don't know
   a. If "yes," please give at least one concrete example.

_____

_____

   b. If "no" or "don't know," please explain.

_____

_____

_____

7. **Please rate your organization's M&E technical capacity after the trainees attended the course.**

Poor									Excellent
1	2	3	4	5	6	7	8	9	10

8. **Looking at your organization, are there still training gaps in malaria M&E capacity?** ○ Yes ○ No ○ Don't know
   a. If "yes," please give at least one concrete example.

_____

_____

9. **Will you recommend or support other M&E professionals to attend the course after the trainees have completed the regional course?** ○ Yes ○ No ○ Don't know
   a. If "no" or "don't know," please explain.

_____

_____

10. Do you have any recommendation to improve the training course?

_____

_____

11. Do you have other comments on the malaria M&E training course?

_____

_____

Thank you for participating in the survey.

Appendix C. Questions for Stakeholders in In-depth Interviews

IN-DEPTH INTERVIEW QUESTIONS TO OTHER KEY STAKEHOLDERS

Since 2010, MEASURE Evaluation, with financial support from USAID, has been involved in building malaria monitoring and evaluation (M&E) capacity in Sub-Saharan Africa through the organization of annual regional malaria M&E training courses (in Ghana and Burkina Faso). After the first phase of the program (2010-2014), MEASURE Evaluation would like to assess the effectiveness of the program by conducting surveys among trainees, their supervisors (managers) and other key stakeholders. Questionnaires have been designed to assess if participants have retained knowledge and skills gained after attending the training course, to assess how knowledge and skills gained have been applied, and to identify gaps in training to improve future M&E training courses. As part of this assessment, in-depth interviews are planned with representatives of key stakeholders to gather further information on the effectiveness of the training program for building M&E capacity and to identify additional areas of improvement. The following questions are designed for the in-depth interview.

1. Thank you for accepting to dedicate part of you precious time to this interview. Please, can you tell me the name of your organization, your position and the country where you are currently based?

2. Do you have any questions about the survey before we can proceed with the first question?

3. Please, tell me what types of contributions, including administrative and financial support to trainees, design, development, delivery and hosting of the training course, or overall funding of the training course, did you or your organization provide to the regional malaria M&E training course between 2010 and 2014?

4. What is the rationale (reason) that led your (organization's) to contribute to the malaria regional M&E training course (support to trainees, design, development, planning, delivery or funding the course/program etc.)?

5. What were your (your organization) expectations for contributing to the regional malaria M&E training course?

6. Were your (your organization's) expectations met by the training program/course? Please share how/why your expectations have been met or why your expectations have not been met?

7. Was the overall outcome (impact) of the training program worth the investment you/your organization made? Please explain why or why not.

8. Would you support future regional training courses as currently designed and developed? What changes to the current training program would you recommend?

9. Are there any gaps in malaria M&E training that needs to be done, for instances in regard to types of M&E, HMIS training, impact evaluation etc.?

10. What are your suggestions to improve existing investments and your recommendations or comments to further improve the training course?

THANK YOU

Appendix D. Questionnaire for Online Course Students Who Did Not Complete Course

SURVEY QUESTIONNAIRE FOR STUDENTS WHO DID NOT COMPLETE THE ONLINE TRAINING COURSE

MEASURE Evaluation launched the Monitoring & Evaluation of Malaria Programs online training course in 2012. We are administering this survey to participants who registered for the online course, but did not complete the course. This information will help identify how best to improve the course and support your learning interests.

SECTION 1: Background information

1.1 Participant's name: _____

1.2 Current position: _____

1.3 M&E job responsibilities in current position: _____

1.4 Number of years of M&E experience: _____

1.5 When did you sign up for MEASURE Evaluation online Monitoring & Evaluation of Malaria Programs course? Month_____Year_____

1.6 How did you find out about the MEASURE Evaluation Monitoring & Evaluation of Malaria Programs online course?

a. MEASURE Evaluation website
b. Communication/ brochure from MEASURE Evaluation
c. Monitoring and Evaluation of malaria listserv
d. Employer or colleagues at your workplace
e. Other (please specify) _____

1.7 Have you attended or taken any other M&E course? ○ Yes ○ No

Please list the other M&E courses you have taken (this includes other MEASURE Evaluation M&E courses or other non-MEASURE Evaluation courses):

Course 1 attended: _____ Year1 _____

Course 2 attended: _____ Year2 _____

Course 3 attended: _____ Year3 _____

Course 4 attended: _____ Year4 _____

Course 5 attended: _____ Year5 _____

SECTION 2: Feedback on the online training course

This section of the survey assesses reasons for not completing the course, the only system user-interface and instructions

2.1 What motivated you to take the online malaria M&E course?

a. Improve my organization's M&E capacity as it relates to malaria programming
b. Improve my own M&E capacity as it related to malaria programming
c. Personal interest in topic area
d. Career change/research for a new job
e. To effectively interact with M&E staff or consultants
f. Other: Please specify:_____

2.2 In total, approximately how much time have you spent on the online course?

Months	Weeks	Don't know

2.3 Were you able to review all of the eight modules in the online course? ○ Yes ○ No

a. Please indicate which modules of the online course you have completed:

1. Overview of malaria
2. Using data for decision making
3. Introduction to monitoring and evaluation
4. Developing M&E plans for malaria programs
5. Monitoring and evaluation frameworks
6. Monitoring and evaluation indicators
7. Malaria M&E data sources
8. Data analysis, interpretation, and presentation

b. Please specify the reasons you have not completed all of the modules of the online course (check all that apply):

1. Content was too advanced
2. Content was too basic
3. Not interested in the content
4. Content not applicable to job/professional responsibilities
5. Internet access issues/challenges
6. Difficulties navigating through the system
7. Conflicting activities
8. Lost motivation
9. Other (please specify):_____

2.4 Please specify the reason(s) you have not taken the final course certification exam?

a. Have not completed all the course modules yet
b. Did not want to complete the course
c. Did not see value in taking the final certification exam
d. Experienced difficulties in navigating the final course exam
e. Experienced difficulties in navigating through the online course
f. The instructions provided were not clear
g. Experienced Internet access issues
h. Lost motivation
i. Other (please specify): _____

2.5 Are you planning to complete the Malaria M&E online course in the future?
○ Yes ○ No

a. Please specify the reasons why you do not plan to complete the course:

1. Curriculum content is too basic
2. Curriculum content is too advanced
3. Curriculum content is not of interest or relevant to my job
4. Instructions provided in the course are not clear
5. Lack of opportunity to interact with instructors and/or other students
6. Conflicting career or work priorities
7. Internet access issues
8. Lost motivation
9. Other (please specify):_____

2.6 On a scale from 1 to 10 (1 being poor and 10 being excellent), how would you rate the content of the course?

Poor → Excellent									
1	2	3	4	5	6	7	8	9	10

Please specify why you gave this rating:

_____

_____

2.7 On a scale from 1 to 10 (1 being poor and 10 being excellent), how would you rate the quality of instructions provided throughout the online training course?

Poor → Excellent									
1	2	3	4	5	6	7	8	9	10

Please specify why you gave this rating:

_____

_____

2.8 On a scale from 1 to 10 (1 being poor and 10 being excellent), how would you rate the user-interface of the course, in terms of your ability to navigate through the course, see all the content, use the different interactions, etc.?

Poor → Excellent									
1	2	3	4	5	6	7	8	9	10

Please specify why you gave this rating:

_____

_____

2.9 Overall, did the course content meet your expectations? ○ Yes ○ No

Please specify why the course content did not meet your expectations:

_____

_____

2.10 Overall, was the information in course material relevant to your job or professional activities? ○ Yes ○ No

Please comment:

_____

_____

2.11 Was the information in the course useful for helping you to carry out your job?
○ Yes ○ No

Please comment:

_____

_____

2.12 On a scale from 1 to 10 (1 not at all useful, 10 very useful), how useful did you find the following course modules for carrying out your job responsibilities?

	Not at all useful → Very useful									
	1	2	3	4	5	6	7	8	9	10
Overview of malaria										
Using data for decision making										
Introduction to monitoring and evaluation										
Developing M&E plans for malaria programs										
Monitoring and evaluation frameworks										
Monitoring and evaluation indicators										
Malaria M&E data sources										
Data analysis, interpretation, and presentation										

2.13 Have you been able to apply the knowledge and/or skills learnt from the course in your job? ○ Yes ○ No

a. If "yes," please specify how you have applied the knowledge and/or skills learnt in the course to your job:

_____

_____

b. If "no," please specify why you have not been able to apply the knowledge and/or skills learnt in the course to your job:

_____

_____

2.14 Have you recommended the online course to anyone? ○ Yes ○ No

a. To whom did you recommend the online course *(check all that apply)?*

1. Supervisor/Manager
2. Colleagues
3. Friends
4. Others (please specify):_____

2.15 What recommendations do you have for improving the course?

_____

_____

2.16 Please use the space below to provide any further comments or suggestions you have on M&E for malaria programs online course:

_____

_____

Thank you for participating in the survey.

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