International Journal of Technology and Management

Effect of Implementation Factors on Monitoring & Evaluation Results Utilization: Evidence from the Malaria Control Programs in Mukono District, Central Uganda

IJOTM
ISSN 2518-8623

Volume 5. Issue II
pp. 1-8, December 2020
ijotm.utamu.ac.ug
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Abstract

Empirical studies globally have revealed that utilization of findings from the Monitoring and Evaluation Function have been seen to be critical in projects especially in contributing to the success of interventions in communities. Unfortunately, implementation factors are advanced as limiting such utilization but remain less studied in Uganda. This study was thus set out to establish the effects of Implementation Factors on the utilization of Monitoring & Evaluation findings from the Malaria Control Programs implemented in Mukono District, Central Uganda. The study adopted a cross-sectional research design in which data was collected from a total of 120 randomly selected employees who were part of Malaria Control Programs implementation and a Multiple Regression Model fitted in SPSS Version 20.0, Results showed insignificant effects of evaluation quality, capacity and communication but positive significant effect of timeliness on the utilization of Monitoring and Evaluation Findings. It was concluded that on average, Monitoring and Evaluation results were rarely utilized in the implementation of the Malaria Control Programs among the implementing organizations (Mean = 2.34, S.D = 0.56).
The study henceforth recommended that management staff of the organizations implementing programs should design and institute mechanisms which ensure timely collection, analysis and reporting of the Monitoring & Evaluation results if utilization levels are to be enhanced.

Key words: *Monitoring and Evaluation, Implementation Factors, Evaluation Quality, Capacity, Communication, Timeliness, Utilization, Malaria Control Programs*

Introduction

The control of malaria and its elimination remains an important goal of all malaria-endemic countries worldwide. That's why it is fundamental to global health players, the World Health Organization (2016) who stipulates reduction of malaria case incidence by at least 90%, reduction of malaria mortality rates by at least 90%, eliminating malaria in at least 35 countries, and preventing a resurgence of malaria in all countries that are malaria-free by 2030. Such aspirations can, however, be attained faster through the utilization of Monitoring and Evaluation findings as they are central to providing a means for corrective actions, tracking of performance and measurement of the impacts of management actions providing feedback on progress towards goals and effectiveness (Failing and Gregory, 2003).

Quite unfortunate is that the utilization of findings from the Monitoring and Evaluation related activities are characterized by drawbacks in the global arena (Boerma et al., 2009). It is even worse in Africa where the Monitoring and Evaluation function remains a relatively new practice, to the extent that all countries are described as being in a Monitoring and Evaluation formative stage (Porter, 2013). This is as well echoed in the sub-Saharan Africa where utilization of monitoring the evaluation findings is similarly poor since the vast region is characterized by skills and capacity gaps of designing and implementing Monitoring & Evaluation activities (Zogo, 2015). It is however highly reported that the drawbacks in the use of Monitoring and Evaluation results characterized by non-linearity of political change are influenced by a complexity of contextual variables, lack of a supportive organizational environment let alone poor timing (Bamberger, Mackay, and Ooi 2004).

In Uganda, the Ministry of Health, through the National Malaria Control Program (NMCP), has been working towards improving the situation, by increasing the proportion of women attending antenatal care (ANC) services, who received IPT2 from 33% in 2004 to 85% by the middle of 2010. While for better achievement of such goals, a robust Monitoring and Evaluation System, including its use to measure progress and achievements was necessary (Garley et al., 2016), malaria-related diagnoses are still evident. The national efforts have been directed towards providing a basis for performance improvement as provided for in the National Development Plan (National Development Plan, 2010/11-2014/15) with the utilization of Monitoring and Evaluation findings at the Centre stage of improving malaria program implementation (Uganda Bureau of Statistics, 2010). Evidence from unpublished reports from the Ministry of Health, however, indicate malaria cases continuing to account for about 20% of outpatient attendance, approximately 40% in-patient admissions, and about 320 malaria-related deaths occurring every day. There hardly exist sufficient studies that provide information on the effect of Malaria Control Program implementation factors in informing utilization of Monitoring and Evaluation findings for enhanced improvements in such Programs which was core to this study.

Literature Review

Studies that have capitalized on the utilization of Monitoring and Evaluation results like one by Gebremedhin, Getachew and Amha, (2010) found the source of performance data as important in enhancing the credibility of reported results and thus their utilization in future programs implementation. Cornielje, Velema and Finkenflugel (2008) however noted that it is only when the monitoring system is owned by the users that it can generate quality data that is valid and reliable for utilization in future projects. In support Booth, Ebrahim and Morin, (2008) found that the Monitoring and Evaluation system allows for three levels of information by project, activity and organization, where the data for all organizations involved in a specific activity improved quality which was crucial in easing utilization.

Barton, (2007) reported that in designing of an M&E system for use of inherent results proper methods of data collection, appropriate targets, field visits triangulated with a review of records, and interviews was crucial. This was also key to what Kusek and Rist (2004) reported in which frequency of data collection meant more data points enabling tracking of trends and understanding intervention dynamics. Knowledge gaps, however, exist as no mention of effects on the use of the results is made and that needed further investigations.

Gebremedhin et al., (2010) found that the more time passed between measurements, the greater the chances that events and changes in the system might happen that may be missed, which can have consequences if utilized in subsequent studies. Indeed Singh et al. (2009) found time, training, data accuracy and consistency, storage, and means of data analysis as being vital in the utilization of Monitoring and Evaluation results. On the contrary, Ediau (2012) found that results from evaluation data were not routinely collected, compiled, stored, analyzed and shared by Child Fund Uganda and project stakeholders and thus rarely realized. Content gaps that needed clarifications were however eminent.

Gorgens and Kusek, (2010) found that since a Monitoring and Evaluation system cannot function without skilled people, who effectively execute the M&E tasks for which they are responsible, so is the utilization of its results. In support, the UNAIDS (2008) noted that not only is it necessary to have dedicated and adequate numbers of M&E staff but that it was essential for such staff to have the right skills for the work. There was need to report on how such capacity influenced utilization of the M&E results.

Similarly, Acevedo et al., (2010) established that for increased utilization of Monitoring and Evaluation findings, evaluators require far more technically oriented M&E training and development than can usually be obtained with one or two workshops. Acevedo and colleagues argue that both formal training and on-the-job experience are important in developing evaluators with various options for training and development opportunities. On the contrary, Nabris (2002) found that Monitoring and Evaluation activities carried out by untrained and inexperienced people are bound to be time-consuming and costly. Knowledge gaps needed further investigations as Nabris made no mention of the effect on utilization of M&E findings.

Murunga, (2011) reported that players in the field of project management like project and program managers, M&E officers, project staff and external evaluators require specialized training, not just in project management but specifically in the utilization of M&E findings, if the results are to be valued and therefore usable. In support, White (2013) found that Monitoring and Evaluation best practices in development NGOs encounter several challenges when managing M&E activities, one being insufficient M&E capacity, taking on the M&E work of too many individual projects over-stretches limited M&E capacity leading to limited utilization.

Furthermore, TIR (2007) established that organizations carry out casual compilations of reports from the field guided by donors' prescribed reporting requirements limiting the utilization of the results especially since information is compiled without giving meaning to the data for accountability purpose. However, PELUM Uganda, (2008) found that if Monitoring and Evaluation could generate information that is well packaged and disseminated in the right form, utilization of the results is somewhat assured. Empirical investigations were necessary for an attempt to verify assertions in the later study.

Kusek, *et al*, (2004) reported an overwhelming support that indicators measured are just as important as the timing of M&E in promoting the use of results. In agreement Bourckaert, Verhoest and De Corte (2009) observed that indicators for measuring program performance were difficult to identify unless the M&E results were produced on time. Equally supported, Cunnen (2006) found that a system of over two thousand societal indicators to measure results for Canadians across all sectors needed to be timely. Knowledge gaps called for further studies as Cunnen remained silent on utilization. Therefore, in light of the aforementioned, there was need for studies that were peculiar to MCPs in Mukono district Central Uganda.

Methodology

Study design and setting

The study adopted a cross-sectional research design that employed both quantitative and qualitative approaches that were descriptive in identifying implementation factors affecting utilization of Monitoring and Evaluation findings in implementation of Malaria Control Programs in Mukono District.

The primary method was a quantitative survey of the evaluation implementation factors, decision factors, community factors and utilization of Monitoring and Evaluation findings amongst the six organizations implementing MCPs in Mukono District. To complement the survey, Key Informant Interviews (KII) were also conducted. KIIs helped in clarifying complex phenomena like behaviors and motivations that emerged

during the survey. A descriptive survey was used to establish the association between variables at a given point in time without attempting to change their behavior or conditions.

Sample size

The size of the study population was 171 employees from Monitoring and Evaluation departments. The employees belonged to six organizations that at the time implemented Malaria Control Programs in the District (Mukono DPP, 2010-2015). The sample determination formula by Yammane (1967) was adopted to get a target random sample size of 120 employees.

Data Analysis

Data analysis involved the process of categorizing, ordering, manipulating and summarizing data to obtain answers from the research questions. Data was collected, entered and analyzed in SPSS Version 20.0. Quantitative data was analyzed using descriptive statistics where responses from questionnaires were tallied and analyzed using frequency distribution, percentage, mean, and standard deviation. Qualitative data was analyzed using a thematic approach. In particular, the data from interview schedules were sifted through, sorted into themes, categories, and patterned. These were then illustrated using quotations from the interviewees.

The following is the specification of the Multiple Regression Model that was fitted;

$$Y = \beta_0 + \beta_1 + \beta_2 + \ldots . \beta_n + \varepsilon$$

Where;

β_1 = Implementation Factors (Independent Variables)

Y = Level of utilization of M&E findings (Dependent Variable)

β_0 = Intercept

ε= Error Term

When the Model was fitted the decision, rule was such that the implementation factors were significant if the p-value was less than 5% as a level of significance.

Results and Discussion

Table 1: *Descriptive Results on State of Evaluation Implementation Factors*

Evaluation of quality aspects	Mean	Std. Deviation
On the overall, monitoring and evaluation activities are undertaken in a way that satisfies the stakeholders	4.16	0.72
The monitoring and Evaluation process until the production of results is handled by qualified and trained staff	3.60	0.61
The M&E activities including the final reporting always meet the established standards of conducting the M&E process.	3.21	1.42
Sub Mean & Standard Deviation	**3.65**	**0.92**
Capacity level of the organizations in Relation to M&E	**Mean**	**Std. Deviation**
The leaders in this organization ably inspire, prioritize, make decisions, provide direction, and innovate the way M&E activities are undertaken	3.66	0.61
The management of this organization ably ensures effective and efficient use of both the human and non- human resources in the M&E activities of MCP	4.29	1.06
This organization is highly equipped to implement MCP programmatic monitoring and evaluation functions.	3.44	0.79
The organization has got adequate staff that are used in the planning, data collection, analysis, reporting and dissemination of M&E findings	4.19	0.79

The organization is able to provide the necessary financial resources that are utilized in undertaking the M&E activities	3.96	0.93
The organization has got functional equipment which is used in the process of collecting, analyzing and disseminating M&E findings	3.68	1.04
The organization has got the necessary technology and articulate information systems that are used in undertaking M&E of MCP	3.89	0.86
Sub Mean & Standard Deviation	**3.87**	**0.87**
Communication of M&E Findings	Mean	Std. Deviation
The communications of M&E findings are normally done in their rightful contents as per the requirements of the stakeholders	4.54	0.60
In communicating monitoring and evaluation findings, formats that are friendly to the audiences are normally adopted.	4.10	0.64
The medium used in the communication of the M&E findings is diverse enough to cater for information needs of all audiences	4.07	1.03
The methods used in the communication of M&E findings meet the needs of the audiences that are supposed to make use of the M&E results.	3.09	1.10
Sub Mean & Standard Deviation	**3.95**	**0.84**
Timeliness in M&E Implementation	**Mean**	**Std. Deviation**
The planning of the M&E function is normally undertaken at the right time allowing all stakeholders to participate	3.01	0.93
The finances and the necessary human resources and equipment used in M&E are availed on time by this organization	3.10	0.78
The finances and the necessary human resources and equipment used in M&E are availed on time by this organization	2.70	0.93
The collection of the M&E information relating to MCP are undertaken at the right time when all stakeholders are readily accessible	2.61	1.07
The analysis and report writing of the M&E results from the M&E processes are always undertaken on time	2.37	0.60
The M&E reports are disseminated and therefore always reach the stakeholders on time based on the agreed need.	3.88	0.50
Sub Mean & Standard Deviation	**2.94**	**0.80**
Pooled Mean & Standard Deviation	**3.60**	**0.86**

Key: 4.20-5.00 Very High, 3.40-4.19 High, 2.60-3.39 Average, 1.80-2.59 Low, 1.00-1.79 Very Low

Table 1 indicates high scores regarding the evaluation implementation factors during the malaria control programs' implementation within Mukono district, Central Uganda (Mean = 3.60, SD = 0.86). The high scores were particularly reported for evaluation quality aspects such as; (Mean = 3.65), the capacity level of the organizations in relation to M&E (Mean = 3.87) alongside communication of the findings related to monitoring and evaluation (Mean = 3.95). As can be seen in Table 1, there is just fair timeliness in the implementation of the different M&E aspects given the average scores (Mean = 2.94).

Table 2: *Level of Utilization of Monitoring and Evaluation Findings*

M &E Findings Utilization	Mean	Std. Deviation
The results from monitoring and evaluation of MCPs have been used to inform the current ways we manage risks during the program implementation	2.41	0.49

The M&E findings have been used in the planning and designing of the malaria control programs being implemented	2.41	0.56
The M&E results are always used as a learning point regarding the implementation of MCPs	2.32	0.56
The preceding M&E findings have always been utilized for making decisions regarding the implementation of malaria control programs	2.32	0.49
The formulation of policies on the implementation of MCP has always been based on the successful use of the preceding M&E results	2.07	0.67
The results from M&E have also been explicitly used in undertaking MCP impact assessment	2.32	0.54
The improvement in the implementation of MCP has been based on the successful utilization of the M&E findings	2.65	0.63
Pooled Mean & Standard Deviation	**2.36**	**0.56**

Key: 4.20-5.00 Very High, 3.40-4.19 High, 2.60-3.39 Average, 1.80-2.59 Low, 1.00-1.79 Very Low
Source: Primary

Table 2 shows a low level of utilization of the results got from the Monitoring and Evaluation in relation to the malaria control programs implemented in Mukono district, Central Uganda (Mean = 3.60, SD = 0.86). Table 2 results show that other than the high use of M&E results in improving the implementation of MCPs, such results were rarely used in informing the current ways of managing risks and also rarely used in the planning and designing of the malaria control program. In relation to learning, making decisions, formulation of policies and before conducting an impact assessment of the MCP, the findings from the M&E activities are rarely used.

Table 3: ***Multiple Regression Results for Implementation Factors Influencing the use of M&E Results***

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	12.557	1.165		10.774	.000
Evaluation quality	-.013	.122	-.059	-.111	.912
Capacity	-.049	.140	-.138	-.348	.729
Communication	.020	.105	.034	.187	.852
Timeliness	.310	.069	.621	4.471	.000
R	.552[a]				
R Square	.304				
Adjusted R Square	.278				
F	11.699				
Sig.	.000[b]				

a. Dependent Variable: Utilization of M&E results

Table 3 indicates the influence of the state of the implementation factors on the utilization of the monitoring and evaluation results in relation to the malaria control programs' implemented in Mukono district, Central Uganda. Results specifically show that the implementation factors have a positive relationship with the level of utilization of the M&E findings ($R = 0.552$, $p < 0.001$). Such implementation factors are combined predictors of utilization of the M&E findings ($F = 11.699$, $p < 0.001$).

Table 3 results, also show that evaluation quality, capacity, communication and timeliness as implementation factors are responsible for 27.8% of the variation in the utilization of the M&E findings as per the implementation of MCPs in Mukono. Besides, timeliness remains the only most important significant factor that has a positive significant influence on the level of utilization of the M&E findings ($\beta = .621$, $p < 0.001$).

Discussion of Findings

In Table 3, the results were following successful fitting of multiple regression model relating Evaluation quality, Capacity, Communication and Timeliness on the level of utilization of M&E findings. In line with the F-test whose value was 11.699 and basing judgment on a *p*-value of 0.000, the null hypothesis that implementation factors had no significant influence on the level of utilization of M&E findings was rejected. This meant that sufficient evidence existed that implementation factors significantly influenced the level of utilization of M&E findings during the implementation of MCPs. This result compares well with what Gebremedhin et al. (2010) earlier found that the credibility of reported results, that is quality, propels utilization in future programs implementation. The result is comparable to what Gorgens and Kusek, (2010) found that skilled personnel as a dimension of capacity was crucial in promoting the use of M&E findings.

Kusek, et al, (2004) overwhelmingly support the assertion that indicators measured are just as important as the timing of M&E. It is as well consistent with what was found by Kusek, et al, (2004) who reported at least some implementer factors as having a significant bearing on the use of M&E findings.

On the component implementation factors, Evaluation quality, Capacity and Communication were not significant implementation factors that influenced the level of utilization of M&E findings. This result is however different from what was found by Booth et al. (2008) and Barton (2007) that easing utilization of results from M&E was a quality issue. The results are inconsistent with what PELUM Uganda, (2008) found specifically communication relating to how well packaged and ways of dissemination. They are quite different from earlier findings by UNAIDS (2008) that indicated capacity in terms of possessing dedicated and adequate numbers of M&E staff in an organization. Further investigations are perhaps called for across varied programs other than MCPs alone.

This study, however, found timeliness as having a significant positive contribution towards the utilization of M&E findings in the implementation of MCPs. This result compares well with what was earlier reported by Bourckaert et al. (2009) and Cunnen, (2006) that timeliness in the production of the findings from M&E was crucial in promoting their use. The result is as well in line with what Kibblewhite and Ussher (2000) had earlier established that timeliness had a robust bearing in achieving utilization of Monitoring and Evaluation Results. This result is really useful as it illustrates the need for organizations implementing interventions just as its implementers to among other implementing factors prioritize timeliness in findings from M&E activities.

Conclusion and Recommendations

In the implementation of intervention programs like MCPs in this study, implementation factors such as evaluation quality, the capacity of the implementing organizations, the way of communication has important effects that are fascinating and need further investigations. Timeliness in the reporting of the Monitoring & Evaluation findings ought to be taken with care on part of the implementers as delays in reporting may come in when it's too late to make changes in the subsequent implementation limiting their use. The study henceforth recommends that management staff of the organizations implementing programs should design and institute mechanisms which ensure timely collection, analysis and reporting of the Monitoring & Evaluation results if utilization levels are to be enhanced.

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