



UNIVERSITY OF NAIROBI

DEPARTMENT OF ECONOMICS, POPULATION AND DEVELOPMENT STUDIES

**AN ASSESSMENT OF THE MONITORING AND EVALUATION SYSTEM FOR THE
POSSIBLE SEVERE BACTERIAL INFECTIONS IMPLEMENTATION RESEARCH
PROJECT**

**A Research Project Report Submitted in Partial Fulfillment of the Requirements for the
Award of the Degree of Master of Arts in Monitoring and Evaluation of Population and
Development Programmes**

By


DANIEL MTAI MWANGA

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DECLARATION

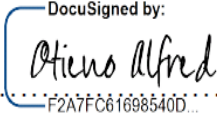
This project is my original work and has not been presented for an award of degree or diploma in any other university or institution.

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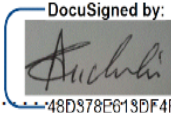
Daniel Mwanga

Q51/35217/2019

This project report has been submitted for examination with our approval as university supervisors.

Signature  Date 11/22/2021

Prof. Alfred Agwanda

Signature  Date 11/23/2021

Dr. Wanjiru Gichuhi

DEDICATION

To my wife Winny, son Ryan and daughter Alina for their prayers and support and allowing me burn midnight oil to get this work done. My mum, brothers and extended family members are also worth a special mention for their support.

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LIST OF ACRONYMS AND ABBREVIATIONS

CHV	-	Community Health Volunteer
FHOK	-	Family Health Options Kenya
IEG	-	Independent Evaluation Group
IFC	-	International Finance Cooperation
IR	-	Implementation Research
M&E	-	Monitoring and Evaluation
MIGA	-	Multilateral Investment Guarantee Agency
NIMES	-	National Integrated Monitoring and Evaluation System
NNRIMS	-	National Response Management Information System
OJT	-	On-Job Training
PATH	-	Program for Appropriate Technology in Health
PSBI	-	Possible Severe Bacterial Infection
PwC	-	Price Waterhouse Coopers
SAT Tool	-	FHI 360 Participatory Monitoring and Evaluation System Assessment
UNAIDS	-	Joint United Nations Programme on HIV/AIDS
UNFPA	-	United Nations Population Fund
UNICEF	-	United Nations Children Fund
USAID	-	United States Agency for International Development

ABSTRACT

This study set out to do an assessment of the PSBI implementation research project. The assessment aimed at determining how well the PSBI M&E system meets established standards of a functional M&E system, identify strengths, weaknesses, or challenges, and recommend good practices in setting up and implementing functional M&E system for implementation science research projects.

The assessment employed a case study research design with mixed methods approach to data collection and analysis. Data collection was through document review, FHI360 M&E SAT checklist scoring and in-depth interviews with sampled project staff. Data were then analyzed quantitatively and qualitatively to synthesize the results.

Overall, based on the checklist, PSBI M&E system scored 167 out of possible 232 which is a modest score of 72 percent which was considered functioning moderately well but needs improvement on some aspects highlighted in this report. The scores varied from 50 to 92 percent. The highest scoring domain was data analysis and use domain (92 percent) followed by plans, guidelines, and operational documentations domain (86 percent) while the lowest scoring domains were data verification domain (50 percent) and resources and capacity building domain (55 percent).

Key challenges that the PSBI M&E System faced were having too many indicators that later had to be reduced, failure to recognize the actual needs of different context of different facilities, inadequate skilled M&E personnel, use of manual system with a lot of paperwork that progressively became a source of data errors, gaps, and inconsistency. Time constraint was also a challenge in implementation of the project, which meant that some activities had to be implemented simultaneously, an important aspect that directly influences quality of the data and

products generated. Another challenge was the COVID-19 pandemic which led to delays and affected how data collection was done especially for the end line survey.

Key lessons learnt included importance of a project to involve key stakeholders while developing M&E system for the project with consideration of differences in contextual factors in the study sites and ensuring there are skilled personnel with M&E and data management and analysis expertise.

The study recommended that for all projects, whether big or small, efforts should be made to ensure that throughout the project cycle, from conceptualization of the study to the end, there is sufficient resources for M&E which includes personnel and financial resources. Data collection tools should be digitized as much as possible and M&E Personal should have adequate skills on M&E. Monitoring data should be continuously analyzed to improve performance and track the project's progress and that projects should always invest efforts to developing detailed project M&E documents including M&E frameworks and associated documents.

CHAPTER ONE

INTRODUCTION

1.1 Monitoring and Evaluation System

A monitoring and evaluation system is defined as a set of activities that are done in an organized or coordinated manner to collect, analyze and report data needed for decision making. These decisions could be for program management, policy options or evaluation decisions (School of Oriental and African Studies, 2010, Gage A and Dunn M, 2010). This study focused on Implementation Research (IR) (also called Implementation Science). IR is simply scientific inquiry into questions concerning implementation. In other words, translating research guidelines or policies or interventions into routine practice (Peters *et al.*, 2013, Carroll *et al.*, 2007). According to Peters *et al.*, (2013) IR is growing but it is not well understood in the field of health research, and also M&E systems for IR projects are not well documented. While the importance of an M&E system for any project cannot be overemphasized, many projects have not integrated it in their activities. Additionally, there is also limited evidence in literature on assessments conducted for implementation research projects.

For successful planning, execution and evaluation of an Implementation Research Project, M&E plays a very important function. M&E helps in tracking the projects progress towards achieving set objectives and targets, helps to identify patterns, make decisions on strategies that are working or not working, and guides decisions on the management of the project (World Health Organization, 2014). It helps the project to properly set up M&E systems that are crucial for providing strategic information for informed and strategic decision making during conceptual stages of the project including formative assessments, identification of partners, during project start up, implementation, evaluation and close out. It helps the project to define, select, collect,

analyze, and use information. It is where everything in the project intersect, that is, formative phases, objectives and indicators setting through to the evaluation of the project to assess outcomes.

1.2 The Possible Severe Bacterial Infections (PSBI) Project

The Possible Severe Bacterial Infections (PSBI) Project, a United States Agency for International Development (USAID) funded implementation science project, implemented by a consortium of partners led by the Population Council is aimed at Scaling up Possible Severe Bacterial Infection Guidelines in Kenya through building confidence in the management of sepsis in young infants (<https://kenyapaediatric.org/ponya-mtoto/>). It was given a name Ponya Mtoto which is sometimes interchangeably used to mean the PSBI project. The project was implemented from September 2017 and is at its last phase. The project was conceptualized because Bacterial infection causes newborn deaths globally and reducing this burden required ways or strategies that would help identify cases early and in a timely manner and start appropriate treatment options. The project aim therefore was to assess the feasibility, acceptability, and sustainability of possible severe bacterial infection (PSBI) management and institutionalize it as part of stronger postnatal and young infant care in Kenya. The specific objectives of the project were (1) To assess the feasibility, acceptability and sustainability of introducing and implementing new PSBI guidelines in representative Kenyan settings where referral is difficult; (2) To describe the process of introducing new PSBI guidelines, updating Integrated Management of Newborn and Childhood Illnesses (IMNCI) training and management protocols for newborn care; (3) To determine the effect of new PSBI guidelines in increasing utilization of good quality PSBI care; (4) To investigate the effect of introducing new guidelines in strengthening and improving family care-seeking and strengthened platform for routine postnatal care; (5) To determine the social costs of introducing new PSBI guidelines on families.

The PSBI project was implemented using Longitudinal mixed method on how to adapt PSBI guidelines in Bungoma, Turkana, Kilifi and Mombasa Counties of Kenya in three phases. In Phase I, national and county level stakeholder consultations were conducted to gain acceptance and plan for appropriate scale up. In phase II, used mixed methods approach and context mapping that builds into the implementation of PSBI with a six-monthly follow-ups and documentation of outcomes. In each county capacity assessment were conducted; focus group discussions with young mothers (15-24 years) with infants; older women (25-45 years), men with infants. In-depth interviews (IDI) with active community health volunteer (CHVs), 16 with young mothers with infants. During the six monthly follow up cycles, case narratives with women who used PSBI and that were referred from the community by CHVs. Additionally, IDI with active CHVs and with frontline providers were also conducted. In phase III, incorporate dissemination of results with a view to embedding and scaling-up revised guidelines.

The research sites were purposefully selected to reflect barriers to care that operate across Kenya and provide contrast in specific barriers to access that apply to different sub-populations as reflected by the diverse vulnerabilities in the selected settings as outlined below: Bungoma County: Western Kenya representing a rural agrarian population, with physical access and cultural vulnerabilities associated with newborn care that is typical of many rural settings. Turkana County: Northern frontier rural and remote setting representing nomadic pastoralist sub-population with social economic, cultural, and geographical vulnerabilities (physical access). Kilifi County: Coastal with mixed rural/urban settings with geographical and cultural vulnerabilities associated with newborn care. Mombasa County: Coastal urban sub-populations of urban poor or informal settlement represents socio-economic vulnerability compounded with complex social and physical access challenges.

The implementation sites are also representative of common health system and utilization challenges that include; Inadequate health provider capacity in managing newborn infections, General workforce problems in planning, motivation, retention, absenteeism, Gaps in health information and poor understanding of young infant disease pattern, Inadequacies in health infrastructure for newborn care, Difficulties in emergency referrals across the continuum of care, Inadequacies in supplies management, poor quantification and forecasting, delays in supply and weak linkages between financial management, procurement and inventory, and County and sub-county governance, planning and accountability challenges.

At the community level, the key challenges are: Harmful beliefs and practices for newborn care such as poor hygiene at birth, application of mud and cow dung on cord stumps in newborns and mixed feeding of neonates; Delayed care seeking for young infants relating to poor recognition of danger signs and deeper social and political determinants with families and communities; Financial barriers among the rural and urban poor coupled with unique transport challenges (high cost of transport to referral services; insecurity in the urban slums, northern frontier limit access to life savings intervention that are provided; and Locations of facilities relative to population density mean that caregivers cannot easily access emergency services, and when they do they often incur unbearable costs and logistical challenges.

1.3 The Possible Severe Bacterial Infections (PSBI) Project M&E System

The PSBI's M&E system is for the purpose of systematically collecting and analyzing data on the project progress, milestones, and documenting lessons learnt. The information generated from the system is used to improve the efficiency and effectiveness of the implementation of the PSBI guidelines. M&E forms an integral part of the project and the team is composed of two project principal investigators, three co-investigators, 2 study team members and three M&E personnel

based in Nairobi. The team also collaborates with county health management teams' focal persons, sub county health management teams focal persons and the County Directors of Health from the participating counties.

The data gathering activities included formative assessment and context mapping at the beginning of the study. This phase utilized a mixed methods approach woven around an initial context mapping and assessment that builds into the implementation process and integrates a strong monitoring system with structured follow-ups and documentation of outcomes. The core methods were qualitative research methods and a continuous structured process of engagement of key influential stakeholders from the community to county government levels to address key questions of feasibility, acceptability, and sustainability. The sources included county and sub county health management teams, facility-based health providers, young mothers with newborns 15-18 years/mother in laws, young mothers with newborns 18-24 years, older mothers with newborns 25-45 years, married men with newborns and active community health volunteers (CHVs).

The study also had follow-ups for infants who received treatment. This was structured around six-monthly cycles of data collection to feed into implementation activities. The study team reviewed the facility data, identified, and invited six families of newborns who received care for PSBI for an interview. Two categories were targeted; those newborns treated under PSBI but not referred from the community (those that received treatment for PSBI at a facility and those referred by CHVs and received treatment for PSBI. The second category of participants consisted of at least three providers per site who provided services for PSBI and three active CHVs from the study sites.

At the end of the study, there would be an endline assessment focusing on changes that occurred during the implementation of the study. The study report would be disseminated with key

stakeholders to feed into the policies around identification and management of PSBI among sick young infants where hospitalization is not feasible.

From the reviewed documents and literature, the PSBI M&E system had not been assessed since it was designed. This study therefore sought to review the PSBI M&E system in order to provide information and evidence on how well it functioned for future improvements. It is also important to note that, PSBI project being an implementation research (IR) project, provided a great opportunity to document challenges faced and lessons other implementation research projects can employ to set up better M&E systems which would translate to better implementation outcomes.

1.4 Problem Statement

Many projects in Kenya are implemented without an M&E system assessed. This means that there is no evidence whether the M&E system is functioning optimally or there are gaps that need to be addressed for improvement. Additionally, many organizations face fundamental challenges in setting up and implementing a functional M&E system for projects and programs (Price Waterhouse Coopers, 2019). Some the challenges faced include insufficient uptake of M&E results and lack of usable data for program. Karani *et al.*, (2014) noted that M&E has not been formalized and adequately institutionalized in both public and private organizations. There may be M&E content and documents but they are not fully operationalized (Karani *et al.*, 2014). Different frameworks including logic models and results frameworks have been developed to aid in the task of better specifying links between different elements of the projects like determinants, strategies and outcomes for impact (Smith *et al.*, 2020). However, implementation research projects often do not give a justifiable rationale on the different components of the project are decided upon and tested (Smith *et al.*, 2020). Documented major challenges in implementing M&E include inadequate experience, financial and staff resources, insufficient knowledge on M&E and

inefficient M&E practices (Mthethwa & Jili, 2016). Organizations have a higher chance of collecting usable data if there exists a fully functional M&E system. WHO (2014) provides guidelines on how to monitor and evaluate an implementation research (WHO, 2014) but there are many Implementation Research (IR) Projects that are implemented without a clear M&E system in place. While these challenges cut across many projects, documenting how these challenges have been circumvented is critical for building knowledge around how other organizations can build their M&E systems for successful implementation of projects. Reviewing an M&E system from a current implementation research projects with existing M&E systems provides a good opportunity to learn the successes and challenges faced and how they have been mitigated. There is little information and evidence from an implementation research perspective on how M&E systems have been built and implemented even as implementation research projects are increasingly being adopted in different disciplines (Eslava-Schmalbach *et al.*, 2019). This study aimed to review the M&E system for the PSBI project, an implementation research project that has been implemented for four years. The review looked at how it was built, implemented, lessons learnt, challenges experienced and how the challenges were mitigated to inform designing M&E systems for future similar implementation research projects. The PSBI project has an M&E system but had not been reviewed and therefore the timing of this study provided a great opportunity given that the project was ending that year (2021). The lessons learnt can be valuable resource for designing future M&E systems for similar studies.

1.6 Research Questions

The study is guided by the following research questions

1. Does the M&E system of PSBI project meet established M&E standards?
2. What challenges have been faced by the M&E system?

3. How have the identified challenges been mitigated against to draw lessons?

1.7 Research Objectives

1.7.1 General Objective

The general assessment objective was to determine the current M&E system status of PSBI project and its contributions toward the improvement of the project implementation.

1.7.2 Specific Objectives

1. Determine whether the M&E system of PSBI implementation research project complies with the established M&E System standards.
2. Identify the challenges faced by the PSBI M&E system
3. Document the lessons learnt over the course of the implementation

1.8 Justification

There is a rise in use of implementation research projects to identify common implementation problems affecting uptake of interventions in the health sector (Eslava-Schmalbach et al., 2019, Peters *et.al.*, 2013). In implementation research, many things are not static, and therefore, in the fast changing environment of IR, M&E systems enable the projects to quickly adapt to the changes, and therefore assessing how well the M&E system is functioning is crucial for it to be able to adapt. Conducting a thorough assessment of an M&E system from an implementation research project with an M&E system with a view of documenting lessons learnt and challenges will provide crucial information to help other implementation research projects and programs to build working M&E systems that can help the programs or projects to track its implementation, adjust where necessary to achieve the desired project results. This study focuses on implementation research, however, the information generated from this assessment will go a long way in helping organizations implementing other research projects because these challenges largely cut across many projects and programs.

1.9 Scope and Limitations

For this assessment, as the selection of indicators and other issues for verification was not random, the snapshot of M&E system functionality gained may not be representative of the entire M&E system. The assessment provides just a snapshot of the M&E system for the Possible Severe Bacterial Infections (PSBI) project. Due to the short time and small sample of issues covered during the assessment, including indicators selected for verification, the results may not be generalizable to the entire program-wide M&E system and may not necessarily reflect the quality of data published.

This study focused on implementation research projects and uses a case study on the PSBI project. Because of time constraints and COVID-19 containment measures, travel to sites where the program was implemented will not be possible. Therefore, the study was only conducted in Nairobi and virtual interviews conducted using available virtual meeting platforms like zoom. This may have biased the study to only respondents that were able to participate virtually. Another limitation of the study was that, since it is a non-experimental study without a comparison group, it was not possible to determine what would have happened to the program in the absence of the M&E system. There is also limited literature on how M&E systems for implementation research projects have been conducted in the past.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter provides a critical evaluation of the available research evidence on M&E, its role in successful implementation of projects. It will cover relevant studies conducted by other researchers in the M&E field. We also reviewed guidelines and gold standards employed in setting up M&E systems in different disciplines where M&E systems have been designed and implemented.

2.2 A Monitoring and Evaluation System

Many organizations have developed management information systems (MIS) and called it a Monitoring and Evaluation system (MDF Training and Consultancy, 2011). While MIS is a component of the M&E system on data management and analysis, an M&E system consists of more than the information systems. M&E system encompasses monitoring activities, evaluation and how the information from these activities are used for program improvement or decision making for policies and national guidelines. Through monitoring activities, the organization is able to track of the progress of the projects while evaluation is for assessing the intervention based on some evaluation questions (Alter and Egan, 1997). The M&E system should be able to extract verifiable data and translate them into strategic information. It facilitates efficient information sharing among key stakeholders including government organs responsible for national policy directions. An M&E system is a collection of people, procedures, technology, and data that effectively interact to make available timely information for all authorized decision-makers (MDF, 2011). All these components of an M&E system work together in a coordinated manner to deliver on a common goal. The M&E functions are aligned with the overall purpose of the project.

2.3 Evolution of M&E

Estrella and Gaventa (1998) acknowledged that M&E had evolved over the years to the need for result-based management, limited resources and involvement of non-state actors in development. In Kenya M&E has evolved with time. The first National Development Plan (NDP) 1966–1970 was targeting raising standards of living of Kenyan citizens.

In 1970s, projects used to have an M&E unit and M&E was used as a management tool which was majorly sort when need arose for decision making on a given aspect of the development project. The second NDP (1970-1984) targeted achieving the country's economic growth and independence. In the 1980s however, there was a shift from project- to sector-wide approaches (SWAPs) and much of monitoring and evaluation work was moved and re-focused at the project level. The result-based management gained popularity with the beneficiaries in focus. Emphasis was now on the measurement of results which then necessitated the need for more robust and sophisticated data collection and analysis tools and sufficient resources. In the 1990s, the biggest issue in Kenya was poverty and therefore poverty reduction became the main focus. The seventh NDP (1994 - 1996) aim was “mobilization of resources for sustainable development”. It was identified that previous efforts notwithstanding, there was still need for improvements on the implementation of M&E methods and culture. During the year 2000, the need for effective monitoring was realized and poverty index went up in most countries. The first target was the year 2015 for achieving the millennium development goals.

2.4 Importance of an M&E System

According to the United Nations Children Fund (UNICEF) (2003) there are two major purposes of monitoring and evaluation. These are documenting lessons for people to learn from and for accountability. It is important for an organization to set a Monitoring and Evaluation (M&E)

system as it assists in the understanding of organization's M&E efforts. Information generated when using the system helps with clearer understanding of the M&E strategies adaptation, the overall organization where the system is used, and the various institutional arrangements involved. Ookoet.al, (2018) in his study also added understanding skills needed and capacity of people involved in the M&E system is central to an M&E system. FHI 360 (2013) defined an M&E system as a guiding process of collecting, analyzing, and using data purposively for measuring and documenting achievements and steadily generating information for program planning and policy decisions. The M&E systems are expected to be efficiently and effectively established to guide the complex cycle of the programs and projects of the organizations.

2.5 Designing an M&E System

The M&E system consists of four interlinked parts. The first part is setting up the M&E system, Setting up M&E system involves identifying information needs to guide the project strategy, ensure effective operations and meet external reporting requirements as well as deciding how to gather and analyze this information and document a plan for the M&E system(Kusek & Rist, 2004). The second part is implementing the M&E system which about actually gathering and managing information, tracking which outputs, outcomes and impacts are being achieved and checking project operations as well as solving problems or having new ideas for improving the initial M&E plan. The third part is about involving project stakeholders in reflecting critically on the information collected. This is about analysis of data and discussing with stakeholders on what the data mean, and implications for policy, identify gaps and lessons crucial for adjusting the M&E plan to ensure that necessary information is being collected. Fourth and not least is communicating the results of M&E. This is about reporting the results to the funding agencies, sharing project progress with project participants, and identifying solutions together in a participatory approach, and being analytical and action oriented.

Designing an M&E system involves the following 10 steps based on the recommendations from the World Bank (Kusek & Rist, 2004). The first step is conducting a readiness assessment which is about analyzing the program's capacity and political willingness to monitor and evaluate its development goal. The second step is agreeing on results to monitor and evaluate and the third is about agreeing on key indicators to monitor results. After indicators and results are agreed upon, the fourth step is undertaken which is conducting baseline data collection on the indicators which then are analyzed and informs development of the project M&E plans and setting of baseline values and targets (fifth step). The sixth step is monitoring for results which involve collecting monitoring data that inform whether the project is on course or some adjustments are needed. At the end of the project, the 7th step is conducting an evaluation to determine to what extent the project achieved its goals (effectiveness), how resources were used to achieve those goals (efficiency), project impact, relevance and sustainability. In the eighth step, the results from the evaluation data are then reported to relevant stakeholders including project donors, beneficiaries, and partners. The different stakeholders who received the project findings can then utilize the information for policy recommendations and programming. The 10th step in the design of an M&E system is documenting clear guidelines, learning from the project on how the M&E system can be sustained within the organization and sharing lessons to help other projects build a strong M&E system.

2.6 Assessment of M&E Systems

Yazdi *et al.*, (2017) described M&E systems as an underestimated tool in reflexive governance of research evaluations. They argued that state-of-the-art M&E systems and practices are a game changer in reflexive governance of research evaluation to better achieve responsibility goals and responsible research and innovation (Yazdi *et al.*, 2017). In a conference paper published in the 2015 conference on 'Monitoring and Evaluation for Responsible Innovation', a state-of-the-art

M&E system was characterized by suggesting elevating ideas in three categories (1) roles and responsibilities, values and principles and competencies of M&E professionals; (2) process design, focus and approach; and (3) institutional changes needed to support (Yazdi *et al.*, 2017, Kusters *et al.*, 2015). They also suggested that the conceptual overlaps between these three categories were simplified by asking the following eight questions: (1) Pursuing accountability or improvement goals? (2) Qualitative or quantitative evaluation? (3) Adopting participatory evaluation, external and independent evaluation, peer review or self-evaluation? (4) Using a centralized evaluation committee or a distributed specialized structure? (5) Adopting a uniform evaluation or a customized one? (6) Whether evaluation at individual, team, project, or organizational level? (7) What evaluation indicators (output/ input/ process)? If capacities, capabilities, resources, output, outcome or impacts, strategic, managerial, etc. indicators should be adopted? And (8) What evaluation model to use?

The World Bank through its Independent Evaluation Group (IEG) assessed M&E systems of International Finance Corporation (IFC) as well as Multilateral Investment Guarantee Agency (MIGA) using various data collection methods including policies desk reviews, internal databases, strategic plans and interviews of staff members and management. This assessment found that IFC had put together an advanced M&E system to gather, analyze and provide evidence that can be applied for decision making and MIGA had actually made significant progress in scaling up its development assessment system. Both IFC's and MIGA's M&E systems have helped very much in improving operations and managing for results in the organizations. The weaknesses revealed by the assessment team showed that IFC's service providers were not able to demonstrate results because not enough time had passed for the intervention's effects to take shape. Gaps were also noted in terms of measuring development for investment projects. The report recommended that

because of self-evaluation being the main project focused, there were a lot of lessons drawn concerning evaluation of programs and strategies (IEG, 2012).

In an assessment conducted in 2012 of the National Response Management Information System (NRMIS), they found that the system faced many challenges including poorly coordinated vertical reporting system, unhealthy competition among sectors, and the rapid emergence of the improperly linked M&E sub-systems. The approach used was participatory, led and owned by the stakeholders for consensus building and adoption of a vibrant national HIV M&E system (Ogungbemi *et al.*, 2012).

In an assessment conducted by USAID/Kenya in 2010 of the Kenya National M&E status and the National Health Management Information System, it was found that health sector lacked a detailed M&E framework, although some M&E strategies for various programs were in place. The assessment group recommended the establishment of an initiative involving all the stakeholders to prepare and implement a sector-wide M&E framework to manage all the activities. Close to a decade later, a few improvements have been made with wide adoption of the HMIS system for reporting all health sector data but there are still issues with the quality of data reported which include timeliness and completeness (United Nations Population Fund, 2020). This points to the fact that still more need to be done to improve use of M&E data and fully institutionalize M&E for programmatic management and decision making.

Mackay (2007) points out that several governments' institutions third world countries are putting a lot of effort in improving their performance. According to World Bank, the growing trend of institutions to measure performance of services and policies is also influenced by member countries of Organization for Economic Co-operation and Development, most of which place a

high priority on four categories, namely: policy development; budgeting; performance and accountability(Mackay, 2007).

Kori (2015) conducted the assessment of M&E system of Family Health Options Kenya (FHOK). The objective of this assessment was to determine the status of the FHOK M&E system and how much it contributes to program implantation and improvement of its outcomes. They found that the overall performance of FHOK M&E system was 62 percent which was an aggregated score from all the 8 components recommended by FHI 360 (2013). The key gaps that were identified included: poor documentation of M&E products and inadequate evaluation and research capacity(Kori, 2015).

2.7 Summary of Knowledge Gaps

The literature review conducted revealed several important lessons learnt in the assessments conducted as well as how M&E frameworks and M&E systems in general have contributed to better management of development projects by organizations and governments. The literature available focused mostly on M&E systems at the organizational and country levels. There is little information in the literature on assessments conducted on M&E systems of implementation research projects. This study therefore seeks to fill this gap by assessing an M&E system of a currently running project but at its last phase. The timing of this assessment provided better opportunity to learn from the 4 years the PSBI project had been implemented. Lessons, challenges, and mitigation strategies on the implementation of the M&E system are documented to help other similar implementation research projects better design their M&E systems

2.8 Gold Standard for M&E Systems

Joint United Nations Programme on HIV/AIDS (UNAIDS) and World Bank (2008) proposed the 12 components of a functional M&E System. These 12 components were arrived at from a revision

of the 11 components suggested by the World Bank (Gorgen-Albino & Nzima, 2006). They are summarized in Figure 2 and organized under three major categories. That is, in the outer ring is Human Resources, partnerships and planning to support data collection and data use, middle ring focuses on mechanisms through which data are collected, verified, and transformed into useful information and center of the diagram represents the central purpose of the M&E system, i.e., using data for decision making. A fully function M&E system at the National level is one that have all the 12 components of the M&E system fully functioning and up to date (UNAIDS, 2008).



Source: Joint United Nations Programme on HIV/AIDS (UNAIDS), 2008

Figure 2.1: The 12 Components of an M&E System

2.9 Operational Framework for the PSBI M&E System Assessment

For this study, given that we focused on only one project within an organization, we focused on the program level assessment. FHI 360 suggested that at program level, the 12 components can be condensed into 8 main domains using the FHI 360 Participatory Monitoring and Evaluation System Assessment Tool (SAT) (FHI360, 2013). The 8 domains are Resources and Capacity

Building, Documentation and Guidelines, Data Collection and Management, Data Quality Systems, Data Verification, Data Analysis and Use, Evaluation, and Alignment and Leadership. This is the approach this study took. The SAT tool is a checklist with indicators under each of the 8 domains. Each indicator has its measurement scale as shown in Table 2.1. The checklist helps project and program teams to carry out a diagnostic self-assessment for their M&E systems in order to identify areas of strength and weaknesses. The findings can then be used to suggest a quality improvement plan based on the strengths and weaknesses identified in their M&E system. This study therefore used this tool as a facilitated self-assessment checklist to assess whether PSBI M&E system has put in place the minimum standards for a functional M&E system. The domains assessed are summarized in Table 2.1 below and detailed operationalization of the checklist is given in more detail in Appendix 2 (Page 82).

Table 2.1: Domains Assessed in the PSBI M&E System

Domain	Guiding Questions	Indicators (A few – More in detail in appendix)	Measurement Scale (based on FHI360 SAT checklist)
Resources and Capacity Building	<ul style="list-style-type: none"> “Is M&E adequately resourced?” “Have staff received training and mentoring?” 	<ul style="list-style-type: none"> - “The budget for M&E is sufficient (5-10 percent of the overall program budget)” - “The number of M&E team staff is sufficient in relation to the program size (about 1 person per \$1M/yr)” - “Members of the M&E team have received initial orientation on the project M&E system” 	<ul style="list-style-type: none"> “0 – Standard not met” “1 – Standard is Partially met” “2 – Standard is fully met”
Documentation	<ul style="list-style-type: none"> “Is there adequate documentation for the M&E System?” 	<ul style="list-style-type: none"> - “There is an M&E plan (or PMP) which is up to date” - “PMP has a graphic results framework linking project/ program goal, intermediate results and outcomes or outputs” - “Targets have been set for key performance indicators” 	<ul style="list-style-type: none"> “0 – Standard not met” “1 – Standard is Partially met” “2 – Standard is fully met”
Data Collection & Management	<ul style="list-style-type: none"> “Is there a well-functioning Data Collection & Management System?” 	<ul style="list-style-type: none"> - “Training registers/documentation are available and meet donor standards” - “Data collection tools include all required program/project indicators” 	<ul style="list-style-type: none"> “0 – Standard not met” “1 – Standard is Partially met”

Domain	Guiding Questions	Indicators (A few – More in detail in appendix)	Measurement Scale (based on FHI360 SAT checklist)
		- “Data management guidelines exist (e.g. filing systems for paper forms or back up procedures for electronic data)”	“2 – Standard is fully met”
Data Quality Systems	“Are processes and systems in place to generate quality data?”	- “Operational indicator definitions for national/global indicators are consistent w/existing standard guidelines” - “Written guidance on filling in data collection tools is evident at the partner or service delivery level” - “Steps are taken to limit calculation errors, including automation where possible”	“0 – Standard not met” “1 – Standard is Partially met” “2 – Standard is fully met”
Data Verification	“Are results reported accurate and can they be substantiated?”	- “Supporting documents are on-hand & accurate for indicators”	“0 – Standard not met” “1 – Standard is Partially met” “2 – Standard is fully met”
Data Analysis and Use	“Are data well analyzed and used for program management and improvement?”	- “The majority of data collected is reported” - “Reasons for under- or over-performance (e.g. not achieving important targets) are documented” - “Regular analysis includes trends in performance indicators over time (e.g. monthly or quarterly)”	“0 – Standard not met” “1 – Standard is Partially met” “2 – Standard is fully met”
Evaluation	“Is there adequate planning, implementation and use of evaluations?”	- “Evaluation activities are explicitly outlined in the M&E plan” - “Baseline data is available within the first 2 years of project” - “Reports of any past evaluations are available”	“0 – Standard not met” “1 – Standard is Partially met” “2 – Standard is fully met”
Alignment & leadership	“Is the Program M&E aligned with the National M&E system?”“Does the Program demonstrate Technical Leadership in M&E?”	- “Indicators collected include those earmarked for the national program (government)” - “Data collection tools are aligned with those of the Government” - “One or more elements of Program’s M&E system have been published in peer review publications in the last 2-3 years”	“0 – Standard not met” “1 – Standard is Partially met” “2 – Standard is fully met”

Note: This table flows from previous page. Table 2.1: Domains Assessed in the PSBI M&E System

According to FHI360 (2013), relative weights of each domain may be modified to reflect the changing needs and/or priorities by either increasing or decreasing the total number of questions

and filters in each domain. Therefore, based on this background, this study adopted the following scoring. A domain with score of 0-49 percent was deemed not functioning well as expected, 50-79 meant functioning moderately well but needs significant improvements and 80-100 meant that the domain was functioning very well with minimal improvements on some aspects. This scoring interpretation has also been used by Obunga (2015).

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter presents the study was conducted. It covers the study design, study location, target population and sampling procedures, data, and methods for gathering the data, data management, data analysis and presentation.

3.2 Study Design

This study adopted case study design because it studied only one project in an organization. The study employed mixed methods approach to collecting the data. The quantitative data used a standard checklist which was entered by key personnel and reflects the opinion of the respondents. In addition, in-depth interviews (IDIs) with key project staff were used to generate qualitative data. Finally, document review was carried out on key products generated from the M and E system.

3.3 Study Location

The study was implemented in Nairobi at the office of Population Council which was the lead implementing agency for the PSBI project. This is where the M&E system was managed from with monitoring visits for data collection done quarterly to the project sites in Bungoma, Kilifi, Mombasa and Turkana.

3.4 Target Population

The study targeted multiple groups of respondents who had worked in the project and had good understanding of the project from its initial phases when formative assessments were conducted to its implementation. These included principal investigator, co-investigators, program officers, M&E and data personnel as well as research assistants. This groups of respondents took part in various components of the implementation of the project.

3.5 Sampling

The study used non-probability sampling technique, particularly purposive and maintained the case study design of a specific programme. The study sample size was 8 respondents to be interviewed while scoring the M&E assessment tool. The respondents included: 1 project principal investigator, 1 co-investigator, 2 program team member, 1 consortium member, 2 M&E staff, 1 data collector. Other project team members were excluded because they did not take part in the setting up and implementation of the M&E system and therefore would not be having sufficient information to enable them to score the M&E system. In-depth interviews (IDI) were also conducted with 4 key informants. These are, 1 co-investigator of the project, 1 program team member, 1 M&E staff and 1 lead research assistant. The beneficiaries, which in this case the mothers with sick young infants who got services through the project, were not interviewed because this assessment majorly focused on components of the M&E system which the beneficiaries did not have a lot of experience with in terms of its design, set up and implementation. It is for the same reasons that the study only focused on interviewing key members of staff with sufficient knowledge and experience with the implementation of the M&E system.

3.6 Data Collection

3.6.1 Documents/Records Review

A documents/records review process was employed to review the M&E framework, project indicator matrices, project reports, service statistics, data collection tools M&E reports, Strategic Plan, M&E plan including the data use plan among others. To do this, an approval letter from the University of Nairobi authorizing collecting of such information for academic purposes was obtained prior to data collection (Appendix 4).

3.6.2 Interviews and Scoring of the Checklist

3.6.2.1 Quantitative Data

Quantitative data involved using a standardized tool for assessing M&E system adopted from FHI360 M&E system assessment tool was used following the guidelines suggested. The suggested questions that were asked in this facilitated self-assessment standards-based checklist are given in the appendix2 for each of the domains. To reduce desirability bias, a means of verification adopted from the FHI360 SAT checklist was used to objectively verify to what extend a standard is met. (FHI360, 2013).

To complete the checklist, most standards rely on some form of documentation and/or interview with key staff at program and site levels. Given the limitations posed by the COVID-19 pandemic, the study heavily relied on interviews with the sampled project team members and documentations that were available in the study portal. Therefore, all respondents scored the checklist. The summarized checklist scores were allocated for performance of the system against each identified standard on a scale from 0 – 2 where: N/A = standard is not applicable, or not available for review purposes; 0 = standard is not met; 1 = standard is partially met; 2 = standard is fully met. If a respondent did not know or was not sure about a given indicator, provision was given for them to respond as “Don’t know”.

3.6.2.2 Qualitative Data

In-depth Interviews (IDIs) were conducted with 4 key informants. These were; 1 co-investigator of the project, 1 program team member, 1 M&E staff and 1 lead research assistant who participated in all stages of the PSBI project implementation. The interviews used an IDI guide that was developed and reviewed by the researcher. The data were audio recorded, and transcribed verbatim in preparation for analysis.

3.7 Data Management and Analysis

The weighted scores for each component of the M&E system suggested by the FHI360 SAT was used as the benchmark(FHI360, 2013). An overall score was generated and a score for each domain. The scores from filled in checklist from each respondent were summarized using mean for each indicator. The mean scores for each indicator were then fed into the M&E system assessment tool which generated aggregate scores for each domain and the scores were measured against the gold standard as shown in Appendix 3. Different domains were compared to identify the gaps and highlight relative strengths and weaknesses. Quantitative analysis was conducted in Excel. The scores were interpreted as described in chapter two.

Transcribed qualitative data were analyzed using NVIVO qualitative analysis tool. The transcriptions were categorized into thematic areas based on the objectives of the study and summaries extracted using quotes from the interviews in a narrative format.

3.8 Presentation of Data and Communication of Findings

Quantitative results are presented in tables and charts while qualitative results are presented in terms of quotes from the key informants. Conclusions and recommendations from the assessment are also presented in chapter five highlighting areas for improvements. This next step will then be to develop a technical brief or journal paper to share the findings to help other similar programs when designing their M&E systems. Where necessary, the findings of the assessment will be presented to the project team and stakeholders to debrief them what worked well, what did not work particularly well and what could be done better.

3.9 Ethical Considerations

Ethical consideration is very important for ensuring credibility of and confidence in the study findings. For this reason, ethical protocols and principles highlighted by Belmont (1979) were

used. Considerations were employed to ensure that respondents are provided with: a chance of making choice to participate or decline participating in the study; explanations to understanding the purpose of the study, likely risks and assumptions associated with the study; a clear understanding of the fact that no individual impact of the study is possible; knowledge that they would be free to pull out from the study at their own will; the knowledge that they would be free to decline to answer any questions they are uncomfortable with; and the reassurance that their responses would be strictly confidential(Belmont, 1997).

CHAPTER FOUR

FINDINGS OF THE PSBI PROJECT M&E SYSTEM ASSESSMENT

4.1 Introduction

This chapter provides a discussion of the results from the assessment conducted. It starts by discussing the findings from a document review conducted, followed by the status of the M&E system based on the standards-based checklist called Participatory Assessment Tool suggested by the FHI 360 (2013). The strengths and challenges of the PSBI M&E system are also discussed and recommendations of good practices learnt shared to help other similar projects who intend to set up an M&E system. The results from the SAT checklist are also triangulated with the results from in-depth interviews conducted with a few project team members. The chapter ends with the presentations and discussions on how the products of the PSBI M&E system have been used and continue to be used by relevant stakeholders.

4.2 Characteristics of Study Respondents

4.2.1 Characteristics of Respondents who Scored the M&E SAT Checklist

The respondents who scored the assessment checklist constituted of the project program team (2), project data and M&E team (1), the principal investigator (1) and a lead research assistant (1). Their characteristics are summarized in Table 4.1 below. Data for one of the respondents who submitted the scores were excluded from the analysis because they contained mostly don't know responses which indicated that the respondent did not have sufficient knowledge about the project M&E system. Two respondents were not available for interview.

Table 4.1: Characteristics of Respondents in the M&E System Assessment

	n
<i>Gender</i>	
Male	3
Female	2
<i>Professional Qualification</i>	
Postgraduate (Masters/PhD)	2
University degree (Bachelors)	3
<i>Duration of stay in the project</i>	
1-2 years	1
3 years	4
<i>Role in the project</i>	
Principal Investigator	1
Program officer	2
Program M&E/Data officer	1
Research Assistant	1

There was good representation from both male and female respondents and all of them had at least first University Degree. Four of the respondents had worked in the project for at least three years. The sample drew respondents who played different roles in the project including project leadership, program officers and program Monitoring and Evaluation. It also included representation from research assistants who took part in data collection exercises for the project. This respondents in the sample had relatively good experience in the project and gave their views based on their experience. The distribution also gave the assessment more representative view of the functioning of the M&E system and minimized self-desirability bias.

4.2.2 Characteristics of Respondents in the In-depth Interviews

In-depth interviewees were also conducted among staff who were involved in PSBI project on important roles that contributed to informing the set up and implementation of the M&E PSBI system. They were asked to describe their role in the project and their professional qualifications.

“R: My role was on providing those kinds of indicators that we needed to track, how you needed to measure them, come up with tools to track those systems and that is part of the setting up of the system, but we were also part of it while implementing it in PSBI systems” IDI001

“R: I worked for two years... So, during my recruitment I was supposed to be the link between facility there was a community practice, I would do the data entry then create the data base and create a dashboard that I would share it with the team, and I was also supposed to create a website to show case what community practice was doing.” IDI002

“I was part of the team that designed the process implementing and supporting the health systems and research and designs allowed me to come to this space ... I am currently winding up with publications, one of the papers I am trying to finish”.IDI003

4.3 Status of the PSBI M&E System

The first objective of this study was to determine to what extent PSBI M&E system meets established standards of a functional M&E System. This was assessed using an assessment checklist suggested by FHI360 for smaller projects. PSBI project was considered a small project because it was a 3-year project implemented in only four (4) counties. The assessment consisted of document review, scoring of the checklist based on the document review and discussions with project teams as well as triangulating the findings with IDIs from selected project team members. We first discuss how the PSBI M&E System was set up.

4.3.1 Setting up the M&E System for PSBI Project

The implementation of the project involved 4 counties: Kilifi, Mombasa, Turkana and Bungoma. The study counties were accessed to understand availability of PSBI services at primary health care system where referral services were not feasible. The project target was infants 0-59 days old who were prone to experiencing PSBI. According to the respondents the set-up of M&E systems was important so that they may be able to monitor and evaluate the implementation of the PSBI; acceptability, fidelity, adoption of the PSBI guideline at the primary health facility level as well as the community level. And, to understand the linkage for the community and facility level.

The team worked as a consortium. The M&E system set up was a consultative and iterative process between the lead implementing agency and the partners in the project. The lead implementer formulated monitoring data collection tools which were initially done manually but later transformed to electronic after the COVID-19 pandemic started in Kenya. The purpose of the tools was to collect data that needed to inform the monitoring dashboard based on respective indicators. One of the respondents had this to say.

“With implementation research we came up with tools that you need to access whether PSBI was effective and whether it was accessible and followed the PSBI guidelines and that once we did that as I mentioned PSBI was a partnership which included Mt. Kenya University, Capricorn and also Kenya Pediatric Association and also County Health Management Teams so what we did we had to sit down as consultants and discuss what we needed to have and agree on which one to track and which one not to which was a collaborative effort and once we did that we sent partners to review and put in their comments and feedbacks and once this was done and put in one document then we were able to put in a particular PSBI systems” IDI001

However, participants acknowledged that during formulation of the M&E system they hadn't put into perspective the different dynamics in different counties and operationalization of the tools at the facility level. For example, they had adopted many indicators on DHIS2 which were too many and difficult to follow-up on:

“So that was how we designed the M&E system as a result of not being able to appreciate and understand what was happening in the facility. Two we took cognizance of the fact that there is already a DHIS 2 system where providers documents indicators for care however the sick you infants at primary care level were not available because first there were no sick newborn registers, these came. The second challenge we went through is that even if we set up the M& E tool how would we integrate the system created into the DHIS tool that is a mouthful element so I will talk about that in a little while” IDI003

4.3.2 Document Review

Table 4.2 shows the different documents that were reviewed during the PSBI M&E system assessment. These documents are used as evidence of the different components of the M&E system assessed. They also show how much the PSBI project disseminated the information and products

generated. The documents ranged from the study protocol, theory of change (ToC), M&E plans, data collection tools, dissemination products, documentaries, Kenya Community of Practice (CoP) products as well as the project YouTube channel.

Table 4.2: Documents Reviewed during the PSBI M&E System Assessment.

Type of Document	Current Status	Way to reference it (Online links)
Project Protocol	Up to date	Available on request, but overview is in Protocol
Theory of change	Up to date	Contained in the protocol
M&E Frameworks	Up to date	Available on request
Data Management and Analysis Plans	Up to date	Contained in the protocol
Budgets	Up to date	Internal document, but available on request
Data collection Tools, Dashboard, and job aids		
i. Dashboard	Up to date	PSBI Dashboard
ii. Quarterly system level monitoring tool	Up to date	Link
iii. Quarterly facility level monitoring tool	Up to date	Link
iv. PSBI Caregive Pamphlet	Up to date	Link
v. PSBI Healthcare Provider Pamphlet	Up to date	Link
vi. PSBI Management Flowchart for Healthcare workers	Up to date	Link
Kenya Community of Practice (CoP) Documents and documentaries		
i. Videos	Up to date	KCoP videos
ii. PSBI PonyaMtoto Forum	Not completed – Still being worked on	PSBI PonyaMtoto Forum
iii. PSBI Kenya Youtube Channel	Up to date but not much disseminated	PSBI Kenya Youtube
Dissemination Products		
i. Technical and Policy Briefs	Up to date	Turkana County Technical Brief Kilifi County Technical Brief Mombasa County Technical Brief Bungoma County Technical Brief Overall project Policy brief

Type of Document	Current Status	Way to reference it (Online links)
ii. PowerPoints Presentations	Up to date	PSBI Presentations Presentations to conferences
iii. Reports	Up to date	Not yet uploaded
Other Policies and Resources		
i. PonyaMtoto Resources	Up to date	PonyaMtoto Resources
ii. National Policies	Up to date	National Policies
iii. Global Policies	Up to date	Global Policies

4.3.3 Scoring of the M&E SAT Checklist

The M&E SAT Checklist focused on eight domains of a functional M&E System as suggested by the FHI360 for small projects. Each domain had a few indicators that respondents were asked to score as described in chapter three. Aggregated summaries from each of the domains are shown in Figure 3.1 which can also be visualized as a radar chart shown in Appendix 4. Overall performance of the PSBI System was 72 percent with results from the respective domains ranging from 50 to 92 percent. Results from the domain-specific indicators are summarized and discussed under each domain of the assessment.

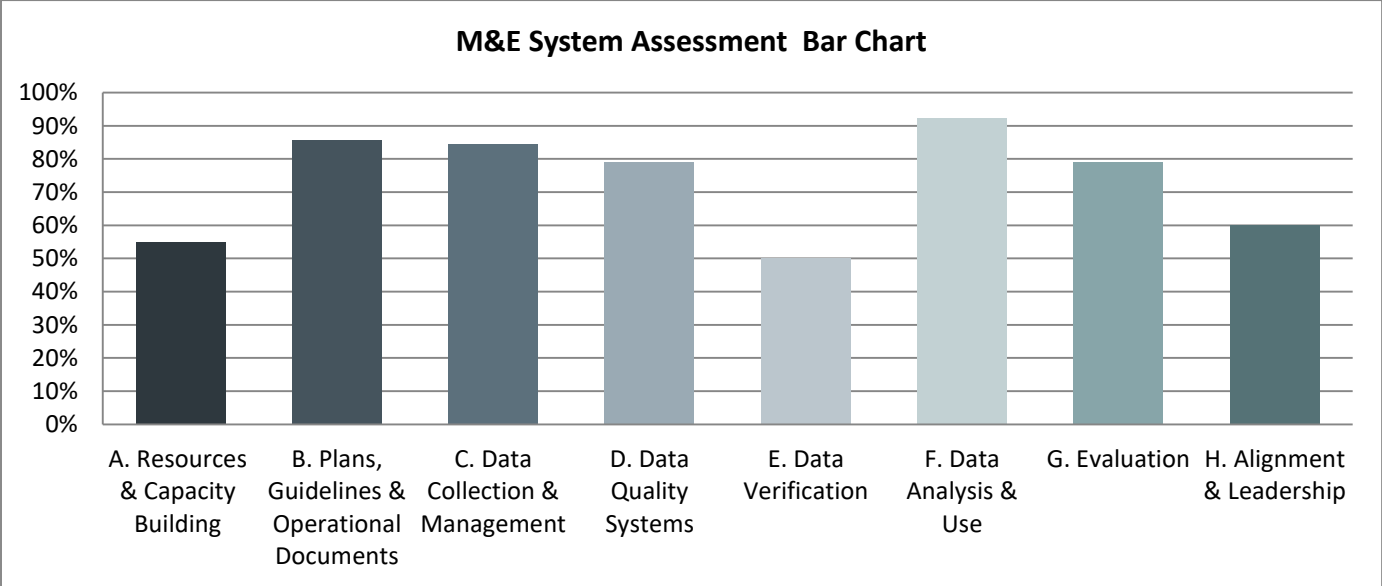


Figure 4.1: Aggregated Summaries for the Domains for the PSBI M&E System Assessment

In the next sections, we discuss each of the domain with respect to how PSBI the M&E system performed. We use both the document review results, M&E SAT checklist as well as the findings from the in-depth interviews with key informants.

4.3.4 Resources and Capacity Building

This domain majorly sought to answer the following questions: Is M&E adequately resourced? Have staff received training and mentoring? Results are summarized below. The results from the checklist are summarized in Table 4.3.

Table 4.3: Results from the M&E Assessment Checklist on Resources and Capacity Building

Domain

Detailed Checklist	Rating	Value	Max	“Observations, rationale for rating and recommendations”
“The M&E budget is between 5-10 percent of the overall program budget”	Partially meets	1	2	The budget does not necessarily meet the given standard but there is a budget for it
“There is/are dedicated staff for M&E”	Fully meets	2	2	There was a dedicated member of the team who handled M&E, dashboard creation and updating community of practice as well
“The number of M&E team staff is sufficient in relation to the program size (about 1 person per \$1M/yr)”	Partially meets	1	2	The project could benefit more from more members dedicated to M&E
“The M&E team (if >3 persons) has an appropriate skills mix (e.g. data analysis, evaluation/ research, HMIS)”	Partially meets	1	2	The dedicated staff had IT and data management skills, but perhaps could have been trained more in data analysis as well
“Members of the M&E team have received initial orientation on the project M&E system”	Fully meets	2	2	This was done to the M&E personnel
“Members of the M&E team have been trained at least once in the last two years”	Fully meets	2	2	COVID-19 affected capacity building efforts for M&E, but the staff had short trainings out of their own initiative
“Members of the M&E team have received a mentoring/supervision from their supervisor in the last 6 months”	Does not meet	0	2	This was not done largely due to COVID-19 when most activities went virtual
“Program has had an M&E TA visit from HQ/region at least once in the last year”	n/a	n/a		There were no site-specific M&E personnel, all M&E activities were coordinated centrally from the lead implementing agency
“Partner M&E staff (including those at site level) have all received initial training on the project M&E system”	n/a	n/a		There were no site-specific M&E personnel, all M&E activities were coordinated centrally from the lead implementing agency

Detailed Checklist	Rating	Value	Max	“Observations, rationale for rating and recommendations”
“A procedure exists for orienting new partner staff on the M&E system in case of staff turnover”	Partially meets	1	2	Since M&E activities were coordinated centrally at the lead implementing agency offices, this was not anticipated that much, but documents exist for orienting anyone on the M&E system
“Partner program management staff have received training or orientation on project M&E requirements”	Partially meets	1	2	Since M&E activities were coordinated centrally at the lead implementing agency offices, this was not anticipated that much, but documents exist for orienting anyone on the M&E system
“Members of the M&E team have visited partners for capacity building/mentoring at least once in the past 6 months”	Does not meet	0	2	This was not done largely due to COVID-19 when most activities went virtual
Total Score		11	20	Overall score: 55.0 percent

The average score for resources and capacity building was 55 percent with respondents feeling that while the system functioned well, there was big room for improvement in terms of adding more human resources on M&E. It was also noted that there were no formal M&E trainings to the team who had to rely on on-job trainings for M&E. The results from the checklist agreed with what most key informants had to say. One IDI respondent felt there was adequate M&E staff that ranged between 8 to 12 with a representative for each county, availability of a focal county and sub-county health personnel, most of the interviewees were confident that M&E specialists were only two based at the lead implementing agency’s office in Nairobi. The mandate of the M&E staff was to manage the day-to-day operations of the project regarding data management, monitoring data collection, analysis and updating of the dashboard. They were also mandated to offer on job trainings for the rest of team to appreciate what indicators were important how they were supposed to be collected.

“I think I only knew of two M&E specialists who really tried to empower the rest. Although the project had sufficient human resource personnel because it was a consortium with Population Council, MKU and The Pediatric Association. So, the two that I am well averse really tried to help the rest of the team on the specific models.” IDI004

“So initially we thought 1,2 M&E experts was enough, but we ended up having three including myself...Not at all because we were struggling with teams in the field that feedback process took a bit of time because of human resources capacity constraints.” IDI003

It is also important to note that there was no designated M&E at the counties nor health facilities to offer support supervision and so the program team used to make quarterly monitoring and supervision visits to the counties to collect monitoring data and to offer support to the county teams.

All interviewees also confirmed that, there was no formal training on M&E, however in most cases skill update was done based on on-job training (OJT) through rigorous engagement with partners while developing tools for monitoring to ensure consistency while collecting quarterly data and supervision

“I think that is part of capacity building it was not a formal one, having meetings together to go through the processes.” IDI001

“we worked together to develop the tools, I take people through the conceptual keys, so it was on basis of the need and area of focus that we were looking at... Not really workshops but on the job training at different times. It wasn't structured in any way. IDI003

“I would say it was an on-job training where people were learning while doing that particular job, but I don't know of any workshop training where the training process would be conducted”.IDI004

A possible cause for the cited challenges was limited finances that had led to the project team shying away from hiring qualified M&E experts to offer support, a role that was initially not considered very much needed but later acknowledged as very important due to the intensity of work and conducting actual M&E training.

R: Not really and I would state this for the record sometimes when programs are designed, M& E are always seen as a last thing that people think they can do with few M&E then you realize it is intense and it requires personnel, and you start cutting budget from other sources. So, my suggestion and my recommendations are that the financial and human resource capacity to create a strong and robust M& E system need to be factor in at any design stage of any project whether it is an M&E research itself. IDI003

4.3.5 Plans, Guidelines and Operational Documents

This domain majorly sought to determine if there were adequate documentation for the PSBI M&E system. Results are summarized in Table 4.4.

Table 4.4: M&E Assessment Checklist Results on the Plans, Guidelines, and Operational Documents Domain

Detailed Checklist	Rating	Value	Max	“Observations, rationale for rating and recommendations”
“There is an M&E plan (or PMP) which is up to date”	Fully meets	2	2	The project M&E plan is there, and it is very elaborate
“Implementing partner(s) have a copy of standard guidelines describing reporting requirements (what to report on, due dates, data sources, report recipients, etc.) ”	Fully meets	2	2	This is detailed in the project M&E plan
“Supervision procedures are documented in writing (how often, what to look at, what happens next) ”	Fully meets	2	2	This is also contained in the project M&E plan
“Targets have been set for key performance indicators”	Fully meets	2	2	This is also indicated in the M&E plan, and also the project team have described the process of arriving at these indicators in the in-depth interview
“PMP has a graphic results framework linking project/ program goal, intermediate results and outcomes or outputs”	Fully meets	2	2	This is detailed and very clear
“PMP/M&E plan or other project design document has an organogram describing the organization of the M&E unit in relation to the overall project team”	Does not meet	0	2	Not clearly indicated
“A PMP matrix exists that lists indicators, annualized and cumulative LOP targets, data sources, baselines, methods, reporting frequency, and responsible entities”	Fully meets	2	2	This is clearly indicated in the M&E Plan and the Project protocol
“PMP includes indicators for measuring input, outputs, outcomes and where relevant, impact indicators, and the indicators are linked to the project objectives”	Fully meets	2	2	This is clearly indicated in the M&E Plan and the Project protocol
“All PMP indicators have operational definitions e.g. performance indicator reference sheets”	Fully meets	2	2	This is clearly indicated in the M&E Plan and the Project protocol
“An up-to-date implementation timeline for M&E activities is available”	Partially meets	1	2	This is not clearly updated. Based on the in-depth interview, COVID-19 had an effect on the overall implementation of the project
“M&E work plan includes regular internal DQA activities”	Partially meets	1	2	This is not clearly stated. The team keeps reviewing the tools but not clear how DQA activities are incorporated

Detailed Checklist	Rating	Value	Max	“Observations, rationale for rating and recommendations”
“The up-to-date M&E work plan indicates persons responsible for each activity, including any M&E-related roles for the program/technical staff and implementing partners”	Fully meets	2	2	This is clearly indicated in the M&E Plan
“Implementing partner(s) use a standard reporting template”	n/a	n/a		
“M&E plan/PMP has a dataflow chart that clearly demonstrates how data reaches program managers and donors/government”	Fully meets	2	2	This is clearly indicated in the M&E plan
“Documented confidentiality protocol is available (If personal records maintained)”	Fully meets	2	2	The project ensures high level of ethical standards and data protection, confidentiality of information is clearly outlined in the protocol that was approved by ethical review boards
Total Score		24	28	Overall score: 85.7 percent

This domain scored highly at an average of 86 percent. This means the system was functioning well as per this domain, but of course there is room for improvement. The project demonstrated high levels of adherence to the keeping up to date documentation for project M&E system, but the checklist has identified a few gaps listed above. This agrees with the findings from the document review conducted and results in Table 4.2 for the different documents and resources that were reviewed.

4.3.6 Data Collection and Management

Data collection is an important activity for any functional M&E system. This assessment sought to determine if there is a well-functioning Data Collection & Management System for the PSBI project. Results are summarized in Table 4.5 below.

Table 4.5: M&E Assessment Checklist Results on the Data Collection and Management Domain

Detailed Checklist	Rating	Value	Max	“Observations, rationale for rating and recommendations”
“Training registers/documentation are available and meet donor standards”	Partially meets	1	2	Training registers are not clearly indicated
“Data collection tools include all required program/project indicators”	Fully meets	2	2	Data collection tools very much align to the national tools and meet the project needs

Detailed Checklist	Rating	Value	Max	“Observations, rationale for rating and recommendations”
“There is no (or minimal) duplication in data collection requirements for staff/partners, i.e. they are not required to report the same activity on more than one tool”	Partially meets	1	2	This is not clearly indicated
“Data management guidelines exist (e.g. filing systems for paper forms or back up procedures for electronic data)”	Partially meets	1	2	Data management plan is only indicated in the study protocol - No detailed data management plan was available for review. However, the one detailed in the protocol was somewhat sufficient
“Historical data is properly stored, up to date and readily available”	Fully meets	2	2	The data is stored in project SharePoint folder and is only accessed by the project team, but can be made available upon request
“The project has one or more electronic M&E databases which are up to date”	Fully meets	2	2	There is electronic dashboard that has all updated reports. They are also uploaded to the Kenya Community of Practice site where all information is shared
“Data from services is disaggregated by gender and age and training by gender”	Fully meets	2	2	This is clear based on the reports and powerpoint slides reviewed
“If client-level personal information is collected then IDs are used to protect the confidentiality of clients, and access is restricted to this information”	Fully meets	2	2	This is well adhered to and well indicated in the protocol that was reviewed and approved by the institutional review board
“Field level data entry (filling in forms) occurs immediately or shortly after service provision to limit recall bias”	Fully meets	2	2	Monitoring data collection were largely done quarterly as per the design of the project, and these were adhered to
“The number of data collection tools is sufficient for program needs and not excessive”	Fully meets	2	2	All data required for the project were collected
“There is adequate documentation/in-house capacity for the program database so that it can be modified by one or more staff”	Fully meets	2	2	The data documentations are well done
“Safeguards are in place to prevent unauthorized changes to data”	Fully meets	2	2	Data is only accessed by authorized staff and can only be shared upon request that must be approved by the study principal investigator
“There is management support for following up any persistent data gaps with partners”	Partially meets	1	2	This is not clearly indicated, but there were measures for this as indicated by the in-depth interview respondents.
Total Score		22	26	Overall score: 84.9 percent

The data collection and management domain scored a high score of 85 percent which means the system functioned well as per this domain with a few areas for improvement. This was because of the thorough documentation the project endeavored to keep, and evidently available in the Kenya Community of Practice portal (<https://kenyapaediatric.org/ponya-mtoto/>). The in-depth interviews

with key informants also revealed similar findings. Key informants shared that monitoring data collection were conducted on quarterly basis where the monitoring team were tasked to engage with respective providers from the selected facilities within the study counties. Before the actual data collection process, tools used in the previous cycle were reviewed, challenges discussed, and recommendation made for properly planned on what to consider in improving the monitoring process in the following phase. Respondents had this to say.

*“Before we went for the rounds of course we went to meetings to ensure that it was an iterative process so there were some changes that were happening along the way so we could sit down review some of the tools, discuss the challenges and how we can deal with the challenges before the next round. That’s how the planning for analysis was done”*IDI001

*“We sat down as a team to design the tools which speak to the M&E system, the indicators and the theory of change. The second step is to build a system the cycle and process of how you want to collect the data... Then on a quarterly basis we are able to see this data on a dashboard and make decisions on how and what needs to happen so that on the next visit we are using data to determine the next level so that is how we designed the whole process.”*IDI003

“Quality was ensured through preparation, and as I told you earlier, we would sit as a team and go through the tools that we used in the field, I think it was necessary in also generating a common understanding going through module by module just to ensure that everyone know what to collect when they go to the field.” IDI004

4.3.7 Data Quality Systems

The quality of data collected is of great significance which directly feeds into how the data will be used. Decisions made out of quality data translates into quality decisions that can have influence on the course of policy direction, while decisions based on poor and inaccurate data can mislead policies. It is therefore crucial for projects to take time to ensure data is of good quality. Data quality is managed through all levels of handling data, from inception, developing data collection tools, collection of data, transmission of data, and processing of the data. This assessment therefore sought to establish whether there are processes and systems in place to generate quality data in the

PSBI project. Results are summarized below. Table 4.6 highlights results from the M&E assessment checklist which are then triangulated with the findings from the IDIs.

Table 4.6: M&E Assessment Checklist Results on the Data Quality Assurance Domain

Detailed Checklist	Rating	Value	Max	“Observations, rationale for rating and recommendations”
“Operational indicator definitions for national/global indicators are consistent w/existing standard guidelines (e.g. PEPFAR, PMI, UNGASS, etc.)”	Partially meets	1	2	This is not clear
“Definitions and interpretations of indicators are followed consistently when transferring data from front-line instruments to summary formats and reports”	Fully meets	2	2	The project tried as much as possible to embed the study on the national and international guidelines on PSBI
“Quality controls are implemented to minimize errors when data are entered into computer/PDA (e.g., double entry, post-entry verification, etc.)”	Fully meets	2	2	The study team conducted verification checks
“Written guidance on filling in data collection tools is evident at the partner or service delivery level”	Partially meets	1	2	There are job aids to help the facilities but limited trainings and follow ups
“Steps are taken to limit calculation errors, including automation where possible”	Fully meets	2	2	The M&E team lead the efforts to correct any data issues
“There is a clear link between fields on data entry forms and summary or compilation formats to reduce transcription error”	Partially meets	1	2	This is not clearly indicated
“The number of transcription stages (manual transfer of data from one form to another) are minimized to limit transcription error)”	Partially meets	1	2	The team tried to implement electronic data capture after COVID-19 pandemic started but previously did manual entry of forms
“Systems are in place to adjust for double counting”	Fully meets	2	2	The data management team routinely conducts data quality checks
“Systems are in place for detecting missing data”	Fully meets	2	2	The data management team routinely conducts data quality checks
“Standard forms/tools are used consistently within and between partners”	Fully meets	2	2	The same tools are used across sites
“At least once a year program and/or technical staff (with or without M&E specialists) review completed tools at site or partner level for completion, accuracy or service quality issues”	Fully meets	2	2	These are done quarterly
“Data collection tools/partner reports are filled in completely (take sample)”	Partially meets	1	2	There are forms that are at times not filled completely at the sites and the M&E team must follow up
“Data collection tools/partner reports are filled in correctly”	Partially meets	1	2	There are forms that are at times not filled accurately at the sites and the M&E team have to follow up. But this not very frequent
“All expected partner reports have been received”	Fully meets	2	2	Yes, these have been received
“Donor reports are submitted on time”	Fully meets	2	2	The reports we reviewed have been submitted and other products disseminated

Detailed Checklist	Rating	Value	Max	“Observations, rationale for rating and recommendations”
“Data reported corresponds with donor-specified report periods”	Partially meets	1	2	Not clearly indicated
“Feedback is provided to all service points on the quality of their reporting”	Fully meets	2	2	The M&E team share the dashboard updates with the sites highlighting areas of improvement
“There is evidence that corrections have been made to historical data following data quality assessments”	Fully meets	2	2	Yes. The M&E team kept some audit trail of the changes made
“All sites are reporting on all required indicators”	Partially meets	1	2	There has been evidence of some gaps in some files
“There is evidence that supervisory site visits have been made in the last 12 months where data quality has been reviewed”	n/a	n/a		No site visits in last one year due to COVID-19
“There is evidence that field-level supervisors review data from field workers before it is finalized and passed on”	n/a	n/a		No site visits in last one year due to COVID-19
Total score		30	38	Overall score: 78.9

The M&E System Assessment Tool scored the PSBI M&E System at 79 percent which means that the M&E system was functioning moderately well based on this domain highlighting a few gaps. These gaps are majorly in terms of accuracy and completeness of data at the county and sub county levels that were scored as partially meets because in some cases the M&E team had to follow up with the county and sub county teams to fill up missing data or where the data had errors. Findings from in-depth interviews also highlighted some of these issues. Key informants reported that, usually during the process, the team followed up on clinical forms by providers in treating newborns with PSBI, on how they were filled progressively on Day 2, 4 and 8 to understand adherence of follow-up visits and adherence to treatment. Data obtained from secondary data sources; the number of sick infants normally dependent on third party information. Most cited challenges were missing data or gaps in the data due to unwillingness and inconsistency filling of the forms for PSBI assessment by providers who narrated reasons such as increased workload and failure of the caregivers to return their babies progressive days that was significant for adherence. Most gaps realized were followed-up and filled after months had elapsed.

*“Sometimes when I would get data and do trends, trends mean comparing data several quarters against this quarter for example there is a very big drop in data most of the times I would call the facility and maybe ask how many people came in at this time so sometimes there was a drop naturally other times there was error in collection of data.”*IDI002

*“But for us to see what was happening in the facility at that time, we designed clinical forms which were I saw this baby, I accessed him based on his algorithms and I gave this drug, and I asked this mother or baby to come on day 4 and also come on day 8. Again, the facility providers. So, we designed a paper tool and files, and all the 48 facilities received the paper tools and files and they were distributed during site visits. And when you see here, they document using those forms and those forms. Those forms will help us see what decision and treatment they made about that child. However, when we went back after three months and realized some of the forms were kept in the drawers and were not being used so we tool them round and round on how to use them and that's how we arrived at that.”*IDI003

Another frustrating issue in data collection was a lot of paperwork for manual collection of data from the facilities which was not only a challenge during data collection but also increased chances of data entry mistakes and loss of data. It was stated that a better system of shortening the data collection period as well electronic based system would have been more efficient. This was later embraced when COVID-19 pandemic started in Kenya which after the government restricted movement and in-person interaction, all data had to be submitted electronically. One of the IDI respondents had this to say.

“I think it was more of paperwork and probably there is need to shorten the period because this is a one-week activity, and you are going to 12 facilities you can imagine, and you would want to collect data for four months then really this would be overwhelming. And as much as people would argue that PSBI infant cases are few then giving a provider this workload was quite unfair. We would rather do a system and put the baby's data there which reflects on our end and within four months we can be able to really see what is happening...I feel they are interlinked but you see before I handed the data to the data manager you see I was supposed to collapse data for 48 facilities and these are data filled by different people and I was not there so in an event there is data mix up you would not tell.” IDI004

However, to ensure quality and mitigate on challenges in collecting monitoring data, providers were motivated through On Job skills development on proper documentation of data and management of infants by the team of the consortium as well as a pediatrician

“ Essentially motivating providers to use the tool was quite a challenge as I mentioned earlier...we provide capacity on how to fill and use the forms and then the third challenge is how do we extract that data for M&E so every time a team went out for an M& E facilitation it not only capacity build for M&E management session but also helped reach out to pediatricians who helped during the whole process and so through that we are able to capture both, support them in terms of treatment and also support them on how to get the data then document the data and come back with it and put it into the system. IDI003

4.3.8 Data Verification

Closely related to data quality systems, another important question is how much the project targets are being met and can they be substantiated? The results for this assessment in terms of data verification are summarized in Table 4.7.

Table 4.7: M&E Assessment Checklist Results on Data Verification Domain

Detailed Checklist	Rating	Value	Max	“Observations, rationale for rating and recommendations”
“Supporting documents are on-hand & accurate for indicator 1”: <i>Number of county consultative meetings with key stakeholders held at county level to discuss PSBI</i>	>10 percent above or below reported data	5	10	The target for this indicator was 36. The number of meetings held was not clearly mentioned and not clearly indicated in the monitoring data but the project team estimated the difference to be between 5- 10 percent
“Supporting documents are on-hand & accurate for indicator 2”: <i>Number of facilities with quality improvement teams</i>	Between 5-10 percent of reported data	5	10	The target for this indicator was 48. Based on monitoring data as of 2020, the project reported 43.
“Supporting documents are on-hand & accurate for indicator 3”: <i>Number of facilities using PSBI guidelines to treat babies</i>	Between 5-10 percent of reported data	5	10	The target was 48. Based on monitoring data as of 2020, this was at 40.
“Supporting documents are on-hand & accurate for indicator 4”: <i>Number of PSBI/IMNCI publications prepared and disseminated</i>	Within 5 percent of reported data	10	10	The target for this indicator was 8, the project managed 11 publications. Two peer reviewed publications, four published presentations, four technical briefs and 1 policy brief so far (See table on document review)
“Supporting documents are on-hand & accurate for indicator 5”: <i>Number of facilities with adequate antibiotics each quarter</i>	>10 percent above or below reported data	0	10	The target for this indicator was 48. Based on the draft project endline findings, and the monitoring data as of 2020, there were facilities with stockouts of the drugs. The estimate is >10 percent difference
Total score		25	50	Overall score: 50 percent

This domain scored 50 percent. This means this domain was just about moderate, not quite as expected majorly because of the targets being unclear at baseline. A disclaimer here is that this

does not necessarily translate to the quality of data, but how much the targets were met by the project. In terms of meeting project targets, there were indicators with not very clear targets as per the M&E plan and there were some indicators where data entered was not as per the indicator. For example, there was indicator which aimed at monitoring the number of facilities with adequate antibiotics in each quarter (injectable gentamicin and oral amoxicillin) but the data entered was number of antibiotics and not facilities. However, based on discussions with the project teams, there were facilities that reported stock outs.

4.3.9 Data Analysis and Use

The goal of any M&E process is for the products to be put into practice for evidence-based decision making and policy recommendations. But, for the collected data to be useful and inform decision making, they need to be analyzed. This study therefore sought to establish how the PSBI data analysis is planned for, how it is done and how the findings are used for program management and improvement. The results are summarized in Table 4.8.

Table 4.8: M&E Assessment Checklist Results on Data Analysis Domain

Detailed Checklist	Rating	Value	Max	“Observations, rationale for rating and recommendations”
“The majority of data collected is reported”	Fully meets	2	2	This has been adhered to
“If client-level information is entered into a database, then it is possible to analyze what services each person has received”	Fully meets	2	2	Yes, this has been adhered to
“Reasons for under- or over-performance (e.g., not achieving important targets) are documented”	Fully meets	2	2	Yes, these are well cited in the reports
“Performance issues (e.g., not meeting targets) are followed up with partners/others”	Partially meets	1	2	The M&E team have always followed these up, especially for cases where there were data gaps. However, what happens for underperforming on some indicators is not clearly indicated
“Written procedures are in place to ensure regular (at least quarterly) review of M&E data by program/project managers and/or COP, M&E staff, other technical staff and partners”	Fully meets	2	2	The M&E team developed a dashboard that kept being updated quarterly immediately the quarterly data are received
“At least one data review & interpretation meeting has taken place in the last quarter at the national/program level involving managers and program/technical staff”	Fully meets	2	2	There have been several meetings among project teams, and with partners on what data received means (interpretation) and brainstorming on how the data can be used

Detailed Checklist	Rating	Value	Max	“Observations, rationale for rating and recommendations”
“At least one data review & interpretation meeting has taken place in the last quarter at the local/site level involving partner managers and program/technical staff”	Fully meets	2	2	There have been several meetings among project teams, and with partners on what data received means (interpretation) and brainstorming on how the data can be used
“Regular analysis includes trends in performance indicators over time (e.g., monthly or quarterly)”	Fully meets	2	2	These are done quarterly after every quarterly data are received
“There is evidence that data analysis has led to improvements in program design or implementation”	Partially meets	1	2	This is done but not clearly indicated how the trend analysis have improved the program design
“Donors and/or government have received an analysis report or attended a meeting with results presented - over and above minimum reporting requirements - within the last 12 months”	Fully meets	2	2	The project team have endeavored to share the project results widely. Donors, Ministry of Heal, and other stakeholders have received the project findings
“A gender analysis has been conducted to help programs understand and integrate gender issues”	n/a	n/a		The study did not aim at doing an analysis on gender issues or how the project help on gender issues
“Program/technical staff are familiar with key indicators and results pertaining to their program/technical area”	Fully meets	2	2	Coming up with the project indicators was done majorly collaboratively through discussions among project teams and partners. This is well indicated in the IDIs
“A senior staff member (e.g., Program Manager) is responsible for reviewing aggregated data prior to release of reports from M&E unit”	Fully meets	2	2	The analysis was majorly done by the M&E team and the project PIs and senior program officer reviewed them
“Monitoring data is accessible to relevant technical staff and manager(s) ”	Fully meets	2	2	Yes, technical staff access monitoring data
Total score		24	26	Overall Score: 92.3 percent

This domain scored a high score of 92 percent. This means the system was functioning very well based on this domain. This can be attributed to a wide range of documentation available demonstrating how the products from the project have been taken up. Also, the skills mix of the team was strong in data analysis and used multiple platforms for analysis ranging from multiple purpose statistical software to visualization and dashboard platforms like Power BI. This was found as a strong domain for the PSBI M&E system which is a good lesson for other similar studies. Being an implementation research project, data use is one of the key deliverables. Before data is used, it needs to be analyzed. Findings from the IDIs showed that analysis was a planned activity and it happened continuously during the project cycle and evolved from using different analytic software and tools. It was established that data analysis process was initially done by use of excel, but for prompt visualization of data and decision making, the PSBI analyst used Power

BI to enter on dashboards and shared outputs to various stakeholders at the county and the sub county level.

“initially we were using an excel sheet before we transformed to power BI and that is later on after we thought what the best way would be to create this framework and space and that's how we transitioned to Power BI. IDI003

“Then once the results were out we were able to meet together from the four counties the various stakeholders to disseminate the findings to the various stakeholders and also when we do a visit for example this time for this for a quarter we capture the data for the quarter, then analyze and so when we go to the next quarter we use findings from the previous quarter so we were able to share with the sub county and county health management teams that we were working with and also facilities. So, each county there were six facilities, and we were working with two sub-counties and each sub county had six facilities so in each county there were 12 facilities.” IDI001

“We used a dashboard once you key in the data it changes automatically you don't need to manually update the tables. When I key in data it goes to a central point server and then that data is automatically uploaded. Actually, the dashboards are still running they are on the website, still running if you update the data the trend changes immediately”. IDI002

Although there was constraint in time, the team generated other different products to suit such as the flow-charts, pamphlets, and technical briefs, with segmented messages to suit different audiences.

R: Yes, time consuming as I said audience segmentation is very tricky and as I earlier said we generate technical and county briefs for managers at the county and subcounty level but we said that this can also be used by service providers, so it is the most challenging bit than thinking what message do you really want to tell them so instilling that is not an easy task so the challenge of generating content and dissemination of various products. We were doing as we go for example, we developed job aids for caregivers and providers for the formative phase and we were also looking at how are they using them. We also developed videos that were used and loaded onto the community of practice website so all these things we developed as we were going on. So it is really knowing what you want for a specific audience and working towards seeing how the various products can be accessed and used by the audience. IDI003

4.3.10 Evaluation

Adequate planning, implementation and use of evaluations is an important element in any functional M&E system. Evaluation is a rigorous activity that focusses on assessing the project's

efficiency, effectiveness, relevance and sustainability. Evaluations are commonly done in the middle of the study (midterm evaluation) and end of the study (end of term evaluation). The PSBI M&E system assessment results on evaluation domain are summarized in Table 4.9 below.

Table 4.9: M&E Assessment Checklist Results on Evaluation Domain

Detailed Checklist	Rating	Value	Max	“Observations, rationale for rating and recommendations”
“Evaluation activities are explicitly outlined in the M&E plan”	Partially meets	1	2	This is clearly outlined in the M&E plan and the study protocol
“An outcome or impact evaluation is planned for the program(especially unique and large-scale programs)”	Partially meets	1	2	This was largely affected by COVID-19
“A process evaluation or mid-term review has been conducted for projects which are ≥ 3 years into implementation”	Partially meets	1	2	There was no midline evaluation but from the monitoring data, mini-evaluations were conducted to determine if the project was on track to achieve its objectives
“Baseline data is available within the first 2 years of project”	Fully meets	2	2	This was done
“Reports of any past evaluations are available”	Fully meets	2	2	Baseline evaluation report was available
“Findings from past evaluations have resulted in program improvements”	Fully meets	2	2	Results from the formative assessments were used to inform the indicators and the approach for monitoring the implementation of the project
“Evaluation designs are adequately outlined in a protocol”	Fully meets	2	2	These are clearly indicated in the protocol
“Evaluation protocols include analysis plan, ethical provisions, budget and timeline”	Fully meets	2	2	The protocol was detailed and approved by ethical review board both locally (AMREF Ethics and Scientific Review Committee) and Internationally (Population Council Institutional Review Board)
“Relevant personal data are maintained according to national or international confidentiality guidelines”	Fully meets	2	2	The data protection policies are available
“Evaluation results have been disseminated to all stakeholders”	Fully meets	2	2	Results have been disseminated and other products continue to be generated for publication
“When evaluations have been conducted, local capacity has been built as part of the process”	Partially meets	1	2	The team indicate that they have learnt through the process
“There is a mechanism in place for obtaining periodic feedback on service acceptability from beneficiaries/ target group members”	Partially meets	1	2	This is not clearly indicated
Total Score		19	24	Overall Score: 79.2 percent

The overall score for this domain was 79 percent with a few gaps highlighted. While the study did internal evaluation, the assessment found that it was done well but could have been done better if they considered external evaluation. Given that the project was coming to an end at the time of the assessment, the project indicated that there was no planned detailed external evaluation to assess the overall implementation of the project. This was noted as a weakness in the project because while the team noted that evaluation was internal, a rigorous external evaluation would have given more insights regarding how the project performed. As will be noted in the next subsection, COVID-19 pandemic was cited to play a part in the decision for not having an external. Due to the pandemic, movements were restricted, and the lead implementing agency had internal organizational policies and protocols on how projects should be managed including transitioning to fully virtual data collection and virtual meetings. A rigorous external evaluation for the project would have required travelling to project sites and speaking to project beneficiaries. Despite the challenges brought about by COVID-19, it was established that evaluations for the PSBI project conducted were majorly done internally as noted by the IDI respondent below.

R: I think the only thing we would evaluate was the data that we got so using the data we had collected we would know that the data was going this way, so it was done internally. It is us who would look at it and talk about its external output so there was no external person coming in going to collect data on their own. However, most of donors employ external evaluators with the knowledge of consultants so if something of the sort was done, I am not sure. IDI001

R: Yes, so we designed it before and after with certain aspects with a very strong monitoring system we did monitoring then at the end of the project we did qualitative as well as the formative phase. The formative phase was quite heavy we did a system test, observation, we talked to mums, we talked to CHVs we talked to all actors in the space of maternal and new born health and we strongly looked at the ecosystem in which this was going to be embedded and as it got embedded into the system we then explored the opportunity to expand the system so for me, we did have partnership with The Kenya Pediatric Association, Mount Kenya University and ourselves so we had people doing the evaluation of data from three partners so it was not just one although we didn't have an independent evaluation team but we had an internal one. IDI003

Some of the key findings from the evaluation included, increase number of people who sought and received treatment for PSBI, Increased and better documentation on PSBI, increase number of trained providers and community health workers, Improvement of the triaging process and more so, prevention of deaths and cited challenges during referral and adherence to treatment of PSBI, as described.

R: There were quite a number but the one that comes into my mind is that there was an increase in number of people who seek medication and PSBI management successful at the facility level following the PSBI Guideline. There is also increase in documentation of PSBI as initially there was no documentation amount it but at the end of it, we have seen a n improvement of the same. Not to mention but in terms of capacity building there is an increase in the number of empowered and trained providers who are able to manage the PSBI and there are so many others. We could see cases of PSBI being referred to the facility by community health volunteers. We could also see an improvement in the triaging cases of PSBI and in some facilities initially there was no format of triaging but at least they were able to improve the triaging of PSBI cases in the facility which really prevented more deaths of newborns. IDI001

R: Of course, we saw it was possible to implement PSBI at facility level or primary level, we also saw a challenge in community referral and feedback from facility, community and back. We also saw that was a challenge in caregivers on day 4 and day 8 but overall, we saw a remarkable change by provision to adhere to treatment resume in terms of fidelity. IDI003

4.3.11 Alignment and Leadership

The study also sought to establish whether the program M&E is aligned with the national M&E systems and whether the program demonstrates technical leadership in M&E. This is important for the products generated from the system to be easily integrated to national processes and goals. The findings from the assessment on whether PSBI M&E system aligns with the government goals are summarized in Table 4.10 below.

Table 4.10: M&E Assessment Checklist Results on Alignment and Leadership Domain

Detailed Checklist	Rating	Value	Max	“Observations, rationale for rating and recommendations”
“Indicators collected include those earmarked for the national program (government)”	Fully meets	2	2	These are well aligned

Detailed Checklist	Rating	Value	Max	“Observations, rationale for rating and recommendations”
“Reports have been submitted to the relevant government departments according to schedule”	Fully meets	2	2	These are well aligned
“If applicable data have been reported through a single channel of the national system to prevent double counting of program results”	n/a	n/a		NA
“Data collection tools are aligned with those of the Government”	Fully meets	2	2	These are well aligned
“Regular supervision activities are conducted to ensure activities are aligned with national/international standards”	Partially meets	1	2	The quarterly visits majorly were to collect quarterly monitoringf data and support site teams, but the team did not particularly follow up to ensure alignment
“Program participates in national M&E TWG or other fora”	Partially meets	1	2	The project team has participated in national meetings but not necessarily on M&E
“Program participates in donor M&E TWG or other fora”	Partially meets	1	2	Not clearly indicated which meetings the donor has organized, and the project M&E team attended
“Program has been used as a best practice/learning site for one or more M&E practices by donor or government”	Does not meet	0	2	The program has not been used as learning site
“Program has been used as a best practice/learning site for one or more M&E practices by other (not supported) NGOs/CBOs/FBOs”	n/a	n/a		This indicator is unclear
“Program has presented components of its M&E system at national conferences or other meetings in the last 2 years”	Partially meets	1	2	This was partly done but not specific on M&E. One of the presentations can be found in this link
“Program has presented components of its M&E system at international conferences or other meetings in the last 2 years”	Partially meets	1	2	The project has presented some of the project results to different for a including national stakeholders and partners. However, it is not specific on components of M&E
“One or more elements of Program’s M&E system have been published in peer review publications in the last 2-3 years”	Partially meets	1	2	The project has published two papers in peer reviewed journals, but the two papers do not talk specifically about the components of the M&E but generally the results of the project
Total score		12	20	Overall score: 60 percent

This domain scored 60 percent with a few gaps that were identified. The score represents a moderately functioning system based on this domain. While the project made a lot of effort on ensuring the project aligned with national systems by ensuring data collection tools and indicators

are aligned, the different components of the M&E system were not shared widely and therefore were not used as best practice. The PSBI M&E system had many lessons learnt which are documented in the next subsection and sharing these would be of great use to other similar projects.

The findings from IDIs also highlighted many ways PSBI products have been used at different levels, from the community to national level. At the community level, the project was able to inform the accessibility and feasibility of offering treatment for PSBI among sick young infants the Kenyan context. At the community and facility level, the caregivers were able to access PSBI care for sick infants at primary health care provided by skilled providers, drugs were also made available in the facility facilitated by changes in ordering and management of drug stockouts.

“Locally I think we have had the impact of demonstrating increasing access to medication through simple management health systems and number two we have been able to demonstrate that you can actually embedded certain useful guidelines on an existing platform like MCI which was what we were trying to do within the health care systems.” IDI003

R: capacity building was done for the facility staff because I am happy, they did capacity build the providers by doing a number of workshops and sessions but for monitoring and evaluation people were not really involved in vigorous training. IDI004

At Sub County level it helped to track the number of indicators like the stock outs and essential medicine at Primary Health Care level. As noted by one of the IDI respondents below, some of the products from the project have been adopted by the Ministry of Health.

“Clinical forms and other algorithm in large print outs those were mainly used by providers during presentations and were adopted by the ministry to elaborate how the process goes so we do believe that those products were very useful.” IDI004

At national level, revision of under 5 register to include PSBI indicators, they also improved MNCI guidelines also as part of the International Community of Practice and incorporated learning from different platforms that informed Kenyan Community of Practice (KCoP) and better service delivery for children among the many policies. Such processes in implementation were in

alignment to the goal and visions of the government, because it contributes to reduction of the number of deaths among neonates which is alignment of Vision 2030.

“Demonstrated to the government that using PSBI you can actually increase access to treatment to women and children who might not have access so yes it was useful, and it aligns to the global and national policies of increasing services to children”. IDI003

“The government is using it to formulate policies because the data is there, so they are the ones supposed to formulate policies to better service delivery.” IDI002

“Absolutely you know the government is working on reducing the death of newborns from 22 to 12 by 2030 was to help in reducing the sick infant deaths, outpatient level when there is no referral then that becomes the greatest achievement, so it aligns with the government goals and visions.” IDI001

It was also established that the team had worked on publications and published in peer-reviewed journals and there were several other publications being worked on as noted by the IDI respondent below. Other products included technical briefs, presentations and documentaries

“R: Yes, we have already published two of them, quite a number in the pipeline and we also have technical briefs that are coming up, we also have presentations are were used during the technical working Groups so we have quite a number. We also have documentaries that were done during the implementation which are quite useful with the PSBUI and how they were handled at community level.” IDI001

4.4 Challenges and Lessons Learnt from the PSBI M&E System

The second objective of the study was to highlight challenges faced by the project and how these challenges were mitigated against as far as M&E system is concerned.

Challenges specific to PSBI M&E System

Discussants had a mixed reaction on whether the system was robust. Majority scored the system efficiency at slightly above average because the intention was met and the success met was informative across the globe, because the project had excellent planning with intensive consultation among coordinators, availability of expertise within the consortium who provided ambitious insights towards the implementation of the project.

“Well, I think I have a mixed reaction under the M&E. We had partners who were doing the M&E and were skilled personnel with vast experience on research. We are working with the pediatricians from Pediatric Association who were eligible members who really understand what goes in a project for it to succeed and also in managing infants... and before going to the field we had meetings to identify the gaps even while we were preparing ourselves before going to the field we had a number of meetings to ensure that each and every person given a responsibility were well versed and that would result to quality.” IDI004

However, with the earlier cited hitches within the system, such as having too many indicators that were later had to be reduced, failure to recognize the actual needs of different context of different facilities, inadequate skilled M&E personnel, availability of manual system with a lot of paperwork that progressively increased the process of data collection and influenced sources of errors, gaps and inconsistency. In addition, uncooperative providers who to some extent didn't recognize the importance accuracy in filling the clinical forms also based on the nature of their work and duration taken before actual collection of data to efficiently track and promptly follow up on the gaps was a challenge. Also, there was no prompt data collection system to inform the data collection progress.

“but now getting data on paper gave a different view of the system because it is dependent on human mind. You have a few papers, you have to organize them, you have to talk to a number of people and now by the time you get to the office it is a different case because some of the things that needed to be clarified to the data manager you could not remember what you had said. There were some gaps but I feel the M&E system was okay because of the consistency in data collection 3-4 months and also people on the ground were well coordinated and supported that's why I am saying I am 50/50 in terms of implementation there were some hitches but while setting up they had a very good idea. IDI004

“Cleaning was a challenge initially you know people were writing as much as possible and there were text data and recording but once we automated data it was easier now to see the graphs and the numbers. Sometimes the numbers didn't make sense as you imagined because of challenges from the source but that meant that you had to go back and confirm but we adapted as we went along. The analysis bit once you create a beautiful system that is robust enough you actually don't need to do a lot of things, we wanted to make sure that it can generate its own graphs and it did the problem is the entry, the data that you collected over time. Obviously, we needed human resource to enter data over the and we anticipated that the providers would note this data on their end, but this did not happen in the end. IDI003

*“for this project we were collecting data that needed, the data collected was collected by the senior staff from different consultancy firms who would travel to different facilities there were no RA s there were just senior staff so chances of them making errors was minimal, but you would find that data from certain quarter was missing because we were collecting quarterly. So in the facility data was also missing though it was not them who were not collecting, but it was missing on the forms and books because they facilities were overwhelmed because so you find you are the nurse who is supposed to fill and also treat so this gap could be bridges by contacting the sub county focal person and see how they could intervene but there were still other facilities that had gaps”*IDI002

“the issue of timing in the M&E system, I would recommend tracking to be done every day though given that ours we had to wait for three months so you would realize these gaps” IDI001

In addition to that, time constraint was challenge in implementation of the project, which meant that some activities had to be implemented simultaneously, an important aspect that directly influences quality of data and products generated.

*“...to discuss some of the issues but in the end we managed to overcome all that so I would say time was the issue and we were working on very tight timeline and we had to come up with this system before implementation because ideally it is done before but for our case because of time these things were done simultaneously so the implementation started and we did set up the system but we had to design a proper system for the M&E project.”*IDI001

Effect of COVID-19 Pandemic on Evaluation

COVID-19 pandemic had adverse effects on multiple projects conducted by the lead implementing agency and PSBI was not an exception. There were both challenges and lessons learnt from this situation. For instance, data collection transitioned from manual to electronic which was a good thing. However, the transition came with a few challenges. For example, inability to verify that the data were accurately entered as per the source documents because facilities were sending data directly to the data manager through the electronic systems set up. The transition also meant that only a few indicators could be sent compared to when the project teams used to visit the sites and do thorough review of the data before submitting. One of the IDI respondent had this to say.

“we were doing data collection manually but due to COVID-19 we had to change it to virtual or electronic and of course it had its own challenges because we could not verify some of the details

that were sent to us and it also meant that we had to cut down some of the things we were asking so that the questionnaire or the tool was summarized enough so that it could not generate fatigue or bias so those are the things I can talk of” IDI001

Also, there was limited access to the facilities by caregivers due to fear of contracting COVID-19, which might have had an influence in data reported as well as the overall goal of the project as noted by two of the IDI respondents below.

“Yes, because you see for PSBI the caregivers were supposed to take their infants to the facility in case there was a sick baby but after COVID 19 came there were limited visits to the facility and that caregivers could make because of fear of contracting Covid from the facility so you would find that people with babies who had the bacteria would shy from going to the hospital because you would not want to take your baby to the hospital and then you contract Covid ... And also come to think about it even the providers updating the data was a problem” IDI004

“because we could not do in person data collection, we had to adapt our tools manually, virtually and adapt and use them for actual implementation so Covid 19 really had a big impact secondly we wanted to look and extract some data in the End line we had clinical forms but we were not able to do that because we did virtual and were not able to access the facilities which was a critical drive for our outcome.IDI003

The team also relied on the facility staff who may not have had required expertise to use electronic systems for data submission and the project team could not accurately verify the data from the source documents. The pandemic also affected the trends in numbers of people accessing the facility to be served which meant that the project could not accurately determine whether the trends were due to COVID-19 or the effects of the project itself.

4.5 Lessons Learnt from the Challenges

Further, the project aimed at documenting lessons learnt. The results were majorly from in-depth interviews with key informants sampled from the project. The lessons drawn are aimed at helping the project improve on aspects highlighted and help other similar projects put into practice for better setting up and implementing similar M&E systems.

First it was noted that it is important that a project involves key stakeholders (outside the project scope such as the community, providers, county and sub county key health personnel) while developing M&E system for the project with consideration of differences in contextual factors in the study area. This helps also to improve buy-in in terms of uptake and scale up of the project products. This is true to what Peters *et al.*, (2013) suggested about Implementation Research projects. They opined that “context plays central role in implementation research. Context can include the social, cultural, economic, political, legal, and physical environment, as well as the institutional setting, comprising various stakeholders and their interactions, and the demographic and epidemiological conditions.”

Data collection for monitoring purposes should be a continuous process to pinpoint and correct any inconsistency. Data collection for PSBI project was done quarterly which was a long duration of time. Automating the M&E system would help make data collection more efficient and tracking of progress and can also help reduce the duration of monitoring data collection from quarterly to monthly which then helps increase ability to catch the data issues early. Manual system can be tedious and is prone to causing data errors. One of the IDI respondents had this to say.

“Automate the system so that we reduce the number of people handling the data. It probably comes from the provider and goes straight to the data manager to avoid misinterpretation of data, projection of wrong data or omission and probably having the right people to confirm that this is the right data so that when it gets to four months we just go to confirm if really that was the true picture of it rather than getting it from person A to person B before reaching the manager. Reducing the number of intermediaries before reaching to the data manager would be very essential.” IDI004

Another lesson learnt was to involve well skilled personnel who can make the process more elaborate both at the central office and at the site level. The project’s lack of M&E personnel at the sites was a challenge and contributed to the data gaps observed. The budgeting process should always make sure that they factor in sufficient M&E resources to ensure sufficient human capacity

and sufficient funding to support the different M&E activities. This should also be planned for earlier on during project inception phase and not as an after-thought or way later after the project started implementation.

As Ed Seykota once said, “If you can’t measure it, you probably can’t manage it, things you measure tend to improve”, the project team learnt that clarity on what needs to be measured is important, feasibility and practicality of indicators used is also another critical factor that always need to be considered when setting up M&E systems. This was noted because the project had many indicators at the beginning which had to be reduced after the pandemic hit.

“You have to be very clear on what you wanted to measure, two you have to design a system that is feasible and practical to generate evidence. In other words, don't be over ambitious, but we had to narrow down to the most important ones... don't collect many indicators you will be overwhelmed, create the minimum that you can use for measurement. The third lesson is that don't assume the health workers are very busy think of innovative ways to motivate them to send the data... We used carrots and stick approach we even sent them bundles to send the data, we used child focal persons to nudge providers to submit and fill in the clinical forms. We did on job training. We facilitated them with tools and guides that is the MCI and PSBI guidelines. We designed a wall chart and placed in front of them so that when they are treating patients. Very simple pathway so all these were geared to facilitating them to not only treat patients with the guidelines but also to know what to do at each point and time. So really thinking through the practicalities of generating the evidence but also just a motivation for providers to also fill in and submit the data is an important lesson for us. IDI003

Another lesson learnt was that, if working with the health systems, it’s important to find ways to motivate the providers for consistency of data and evidence generation.

I think that is the time you should start developing an M&E for the project. You need the input from stakeholders and here I meant the consultants members the county teams and also at national level the division of newborn health is very important, so you really need to move forward so that is another lesson you really need to survive. IDI001

The PSBI project team were also collecting, and documenting lessons learnt as far as M&E was concerned as the project progressed. During review of the documents in this assessment, some lessons captured included considering the existing workload of the site implementers (in this case

providers at the facilities). This was because providers had their tasks and adding a responsibility of entering and submitting data could prove too much to ask which could easily lead to poor data quality. It was also noted that adequate training is important for all people implementing any component of the project. Different providers did not have sufficient knowledge on how to fill some forms, and more so when they were required to submit the data online to the electronic data capture platform.

4.6 Discussion

This section discusses what this assessment found in context of what other assessments have also found. More detailed recommendations are given in Chapter Five of this report. This study assessed the status of the M&E system for PSBI project and reveals important lessons for setting up and implementing a functional M&E system in an implementation research set up. The findings of the study are similar to other research in literature for other M&E systems assessed. For instance, Ooko *et.al*, (2018) in their study on influence of human capacity for monitoring and evaluation systems on provision of health care services in Migori County, found that capacity building on Monitoring and evaluation increased access and efficiency in provision of health services in Migori County (Ooko *et.al.*, 2018). Others with similar findings include among others Wambua (2019), Measure Evaluation (2017) and Obunga (2017). This is in agreement with what our study found in terms of resources and capacity building aspects of the project. We found that having sufficiently trained personnel with M&E and data management and analysis skills is an important area of investment for any project to successfully monitor and evaluate its progress and performance.

On plans and documentation, we found that lack of proper documentation has direct influence on the project's ability to more effectively track progress of their indicators which makes it difficult to evaluate the project's success. Otieno (2000) highlighted that many projects in the third world

countries fail to be successfully completed due to lack of understanding of the need for monitoring and evaluation and central to it is proper documentation which include having project M&E frameworks. Also listed as common issues affecting monitoring and evaluation of large International Labor Office (ILO) projects included insufficiency of the log frame in outlining expected results and clearly identify outcome and output indicators more often confusing the two (Lahey R., 2015). This therefore is an important area that all projects should invest time and efforts in. Sometimes it may involve having expert meetings to review the PMP and M&E frameworks before rolling out of the study.

Data collection, data management, data quality management, verification and use of data for action were also found as important aspects of a functional M&E system. Central to these are proper coordination and objectivity in developing data collection tools, operationalization and management of the data management processes including developing of automated dashboards. This also included having systems set up for data quality assurance and verification of accuracy of data reported. The findings of this study are consistent with what Kori (2015) found in the assessment of FHOK M&E system. They found that there was need for organizations M&E teams to conduct more regular data verifications and make necessary corrections prior to sharing of data (Kori, (2015).

Evaluation is an important aspect for any project. We found that PSBI conducted internal end line evaluation because of cited challenges including the COVID-19 pandemic making the evaluation to be done virtually. This meant that evaluation was not as rigorous since only few indicators could be evaluated. Kori (2015) recommended that there should be clear mechanisms on following up on recommendations made in evaluation reports and that local communities should be involved for them to also build their capacity. Lack of rigorous evaluation (which in most cases is external)

means that the project's success could not be ascertained with greater confidence level. It is therefore recommended that projects should consider factoring in sufficient resources for rigorous end of term evaluation and be adaptable to unforeseen challenges.

We found that the PSBI M&E system was addressing important area that feeds into the national goal of reducing infant mortality. This could be seen from project indicators including increasing access to health care facilities for sick young infants with possible severe bacterial infections, and minimizing stock out of drugs in the health care facilities. This means that the project contribution to the national goal could be measured, completeness and accuracy of the M&E plan notwithstanding. From this, it learnt that it is important for projects to make sure their indicators and goals are aligned with national goals for example the Vision 2030 and with national M&E system indicators.

The findings from this assessment have many implications both for PSBI project scale up plans and for other similar projects that may be set up in future. Detailed recommendations based on the findings from the assessment as well as based on challenges and lessons learnt are documented in Chapter 5. Technical brief summarizing the findings and implications may thereafter be extracted for knowledge sharing.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter provides summary of the findings and summarizes the recommendations for improvement and further research. The assessment aimed at determining how well the PSBI “M&E system meets established standards of a functional M&E system”, identify strengths, weaknesses, or challenges, and recommend good practices in setting up and implementing functional M&E system for implementation science research projects.

5.2 Summary of Findings

The assessment employed a case study research design with mixed methods approach to data collection and analysis. Data collection was through document review, FHI360 M&E SAT checklist scoring and in-depth interviews with sampled project staff. Data were then analyzed quantitatively and qualitatively to synthesize the results.

Overall, based on the checklist, PSBI M&E system scored 167 out of possible 232 which is a modest score of 72 percent. This score represents a system that is functioning moderately well with a few areas for improvement. The scores varied from 50 to 92 percent. The highest scoring domain was data analysis and use (92 percent) followed by plans, guidelines, and operational documentations domain (86 percent) while the lowest scoring domains were data verification (50 percent) and resources and capacity building (55 percent).

Key challenges that the PSBI M&E System faced were having too many indicators that later had to be reduced, failure to recognize the actual needs of different context of different facilities during design of the study, inadequate skilled M&E personnel, use of manual system with a lot of paperwork that progressively became a sources of data errors, gaps, and inconsistency.

Furthermore, challenges included uncooperative providers who to some extent didn't recognize the importance of accuracy in entering data, increased workload to the providers who had other responsibilities led to inefficiencies in data entry and promptness of data submission, and tracking and correcting data that had gaps and reported by the data management team. Time constraint was also a challenge in implementation of the project, which meant that some activities had to be implemented simultaneously, an important aspect that directly influences quality of the data and products generated.

COVID-19 pandemic was also found to be one of the key challenges that faced the project. This majorly led to delays because the project teams had to transition to new strategies of collecting data including using electronic data capture platforms which while it was a positive lesson learnt, the time taken to train people and get them to start using it ate into the time for implementing the project. Also, relying on the site teams who did not have M&E training or had very limited skills to use electronic data capture platforms was a challenge and the project team could not accurately verify the data from the source documents. The pandemic also affected the trends in numbers of people accessing the facility to be served which meant that the project could not accurately determine whether the trends were due to COVID-19 or the effects of the project itself.

Key lessons learnt included: (1) It is important that a project involves key stakeholders while developing M&E system for the project with consideration of differences in contextual factors in the study area. (2) Data collection for monitoring purposes should be a continuous process to early pinpoint and correct any inconsistency (3) Involve well skilled personnel who can make the process more elaborate both at the central office and at the site level. This should indeed be considered during budgeting process (4) Clarity on what needs to be measured is important,

feasibility and practicality of indicators used is also another critical factor that always need to be considered when setting up M&E systems.

5.3 Conclusion

This study aimed at assessing the PSBI M&E system to determine how well it is functioning or functioned as far as components of a functional M&E system are concerned, and to document challenges and lessons learnt during its implementation. PSBI M&E system was scored at 72 percent which is a good score representing a system that is functioning moderately well with a few areas for improvement highlighted in the report. While this indicates a good performing M&E system, there is room for it to be improved so that it can function much better. This can be done by working on the different gaps identified. The components that needed the most strengthening was resources and capacity building and data verification. It was also noted that it is important to have adequate funding allocated to M&E personnel and M&E activities. The M&E personnel also need to have the required expertise and training both at the central coordination office and at the site levels. The fact that there was no planned rigorous external evaluation for the project was also a weakness observed. Continuous monitoring of the indicators was also noted as one area that needed to be improved. The project adapted quickly to new strategies of collecting data electronically after the pandemic hit which a good positive the project learnt from.

5.4 Recommendations

Based on the conclusions above, the following recommendations for policy or programmatic improvements were made under each domain of the assessment. The findings from this study can help other implementation research projects M&E systems improve by adapting the good practices learnt from PSBI and as well find ways of improving on the areas identified as gaps. Because PSBI project is in its last phase, these recommendations can be used by PSBI scale up projects or similar

implementation science projects who plan to set up an M&E System to help in implementation, monitoring, and evaluation of their project.

5.4.1 Resources and Capacity Building

As noted by the key informants and from the checklist scores, having sufficient human and financial resources for M&E are key for success of any project. This study recommends that projects should consider deliberately planning for M&E resources in its project budget during application for funding. The resources allocated for M&E personnel should be not less than 5 percent of the overall project budget. The M&E team should also have sufficient training and expertise and have capability to train others on M&E aspects of the project.

5.4.2 Plans, Guidelines & Operational Documents

Clear documentation provides evidence of the project implementation milestones. While there were a few gaps in their M&E plans including unclear targets, there were sufficient documentation. The gaps contributed to the project's inability to effectively track some of the indicators. This study therefore recommends that projects should dedicate time to develop clear M&E frameworks with clear indicators, baseline values, targets, timelines and means of verifications. This will help the projects have clearer way to monitor and evaluate the project performance. The indicator information sheet should also be developed alongside the M&E frameworks. Indicator information sheet describes the indicators in more detail, including but not limited to indicators descriptions, way of calculating them (numerator and denominator), persons responsible and assumptions.

5.4.3 Data Collection & Management

Projects should consider automating most of the data collection processes as much as possible. While doing this, also ensure that the people using the system are adequately trained on who to use it and frequency of data submissions are clear to everyone. The central database where all data

are aggregated should also be monitored and managed keenly by trained personnel who also shares updates routinely through a monitoring dashboard. This approach helps reduce chances of data errors and verifications can be done at site levels during periodic site supervision visits. The data will also be more readily available for performance management and improvement and the frequency of submissions can be increased to increase the number of data points to monitor trends. It is also important for projects to consider developing detailed data management plans and standard operating procedures as far as data management is concerned.

5.4.4 Data Quality Systems

Data quality management is an important aspect of any project. Data quality systems need to be set up and all teams trained on what is expected of them. Different people in the project with different levels of experience on how to handle data at any level should have continuous on job trainings on data quality. Standard Operating Procedures (SOPs) also need to be developed and shared with all project staff at the beginning of the project implementation. There should also be mechanisms to orient new staff of these systems and ensure they are up to speed before they are left to independently work in the project.

5.4.5 Data Verification

The project should ensure clear targets are set. This process should be consultative and iterative to make sure all project partners contribute ideas on what is possible. The targets should be specific, measurable, achievable, realistic and time bound (SMART). The unit of measurement should be clear and the frequency of monitoring or collecting data on it also clarified. The project team should have the finalized M&E Plan document having all listed targets. In addition, from monitoring data, if there are targets that are way off, then it needs to be adjusted or adjust strategies of implementing associated activities.

5.4.6 Data Analysis & Use

Data analysis should be conducted continuously using monitoring data to make sure that the project is on track and adjustments done in good time. Before the project is implemented, the data and M&E team should develop data analysis plan and discuss with relevant project partners. The analysis plan should highlight what indicators it will track, and the analysis approaches proposed. The findings from the project should be disseminated with relevant stakeholders with clear recommendations on their use. Data analysis can be done by anyone from the team who has the skills, but it is important to have a dedicated data analyst in the team who has sufficient Statistical training. If such skill is lacking within the project, then it might be necessary to hire a trained and experienced consultant with such skills who can use modern statistical methodologies to discover insights from the data.

5.4.7 Evaluation

Evaluation is important for the project to determine how it performed. While evaluations can be done internally, more rigorous evaluations are necessary because it has higher objectivity and therefore greater chance to deliver unbiased evaluation findings. For evaluation to be effective, it is important to have good, quality and up to date monitoring data as well as up to date project documents including M&E frameworks and indicator information sheet. Evaluations should also be planned for and adequately funded. The project budget should always plan to have a line dedicated for rigorous end of term evaluation. Also, in aligning with other domains, particularly on plans, documentation and guidelines, projects should endeavor to develop strong monitoring systems with clear indicators and targets which form a platform upon which a good evaluation can be done.

5.4.8 Alignment & Leadership

For quick uptake of the project findings, it is important for the project to make sure the project goals align with the broader national or subnational goals. This also needs to be monitored periodically using monitoring data and comparing with national or subnational estimates on the indicators of interest. For instance, in Kenya, the projects should embed their goals and processes in the Vision 2030 and the National Integrated M&E System (NIMES) indicators. This way, the contribution of the project to the national goal can easily be seen. It also improves on scalability of the project's activities.

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APPENDICES

APPENDIX 1: WORKPLAN

Activity	April 2021	May 2021	June 2021	July 2021	August- November 2021	Assumptions
Proposal Preparation and Defense						Project teams will be available for interviews
Data Collection						
Data Analysis						Defense schedules for the institute will fall within the proposed timelines
Writing of Project Report						
Defense of Project Report						
Revising Final Project based on Project Defense comments						No wars or political turmoil that may interfere with the implementation of the project especially on data gathering activities
Printing and Submission for Approval						
Submission for publication						

APPENDIX 2: PARTICIPATORY M&E SYSTEM ASSESSMENT TOOL

A	“Resources & Capacity Building”	Measurement Scale (0-2)
	For each of the following statements, please score to what extent the standard is met by the PSBI M&E system based on the scale provided under each item. Enter N/A if the standard is not applicable or Don’t know if you are not sure	
A1	“The M&E budget is between 5-10 percent of the overall program budget”	
A2	“There is/are dedicated staff for M&E”	
A3	“The number of M&E team staff is sufficient in relation to the program size (about 1 person per \$1M/yr)”	
A4	“The M&E team (if >3 persons) has an appropriate skills mix (e.g. data analysis, evaluation/ research, HMIS)”	
A5	“Members of the M&E team have received initial orientation on the project M&E system”	
A6	“Members of the M&E team have been trained at least once in the last two years”	
A7	“Members of the M&E team have received a mentoring/supervision from their supervisor in the last 6 months”	
A8	“A procedure exists for orienting new partner staff on the M&E system in case of staff turnover”	

B	“Plans, Guidelines & Operational Documents”	
	For each of the following statements, please score to what extent the standard is met by the PSBI M&E system based on the scale provided under each item. Enter N/A if the standard is not applicable or Don’t know if you are not sure	
B1	“There is an M&E plan (or PMP) which is up to date”	
B2	“Implementing partner(s) have a copy of standard guidelines describing reporting requirements (what to report on, due dates, data sources, report recipients, etc.)”	
B3	“Supervision procedures are documented in writing (how often, what to look at, what happens next)”	
B4	“Targets have been set for key performance indicators”	
B5	“PMP has a graphic results framework linking project/ program goal, intermediate results and outcomes or outputs”	
B6	“PMP includes indicators for measuring input, outputs, outcomes and where relevant, impact indicators, and the indicators are linked to the project objectives”	
B7	“All PMP indicators have operational definitions e.g. performance indicator reference sheets”	
B8	“An up-to-date implementation timeline for M&E activities is available”	
B9	“M&E work plan includes regular internal Data Quality Assurance activities”	
B10	“The up-to-date M&E work plan indicates persons responsible for each activity, including any M&E-related roles for the program/technical staff and implementing partners”	
B11	“M&E plan/PMP has a dataflow chart that clearly demonstrates how data reaches program managers and donors/government”	
B12	“Documented confidentiality protocol is available (If personal records maintained)”	
C	“Data Collection and Management”	
	For each of the following statements, please score to what extent the standard is met by the PSBI M&E system based on the scale provided under each item. Enter N/A if the standard is not applicable or Don’t know if you are not sure	
C1	“Training registers/documentation are available and meet donor standards”	
C2	“Data collection tools include all required program/project indicators”	
C3	“There is no (or minimal) duplication in data collection requirements for staff/partners, i.e. they are not required to report the same activity on more than one tool”	
C4	“Data management guidelines exist (e.g. filing systems for paper forms or back up procedures for electronic data)”	
C5	“Historical data is properly stored, up to date and readily available”	
C6	“The project has one or more electronic M&E databases which are up to date”	
C7	“Data from services is disaggregated by gender and age and training by gender”	

C8	“If client-level personal information is collected then IDs are used to protect the confidentiality of clients, and access is restricted to this information”	
C9	“Field level data entry (filling in forms) occurs immediately or shortly after service provision to limit recall bias”	
C10	“The number of data collection tools is sufficient for program needs and not excessive”	
C11	“There is adequate documentation/in-house capacity for the program database so that it can be modified by one or more staff”	
C12	“Safeguards are in place to prevent unauthorized changes to data”	
C13	“There is management support for following up any persistent data gaps with partners”	
D	“Data Quality Systems”	
	For each of the following statements, please score to what extent the standard is met by the PSBI M&E system based on the scale provided under each item. Enter N/A if the standard is not applicable or Don’t know if you are not sure	
D1	“Operational indicator definitions for national/global indicators are consistent w/existing standard guidelines (e.g. PEPFAR, PMI, UNGASS, etc.)”	
D2	“Definitions and interpretations of indicators are followed consistently when transferring data from front-line instruments to summary formats and reports”	
D3	“Quality controls are implemented to minimize errors when data are entered into computer/PDA (e.g. double entry, post-entry verification, etc.)”	
D4	“Written guidance on filling in data collection tools is evident at the partner or service delivery level”	
D5	“Steps are taken to limit calculation errors, including automation where possible”	
D6	“There is a clear link between fields on data entry forms and summary or compilation formats to reduce transcription error”	
D7	“The number of transcription stages (manual transfer of data from one form to another) are minimized to limit transcription error”	
D8	“Systems are in place to adjust for double counting”	
D9	“Systems are in place for detecting missing data”	
D10	“Standard forms/tools are used consistently within and between partners”	
D11	“At least once a year program and/or technical staff (with or without M&E specialists) review completed tools at site or partner level for completion, accuracy or service quality issues”	
D12	“Data collection tools/partner reports are filled in completely (take sample)”	
D13	“Data collection tools/partner reports are filled in correctly (take sample)”	
D14	“All expected partner reports have been received”	
D15	“Donor reports are submitted on time”	
D16	“Data reported corresponds with donor-specified report periods”	
D17	“Feedback is provided to all service points on the quality of their reporting”	

D18	“There is evidence that corrections have been made to historical data following data quality assessments”	
E	“Data Verification”	
	For each of the following statements, please score to what extent the standard is met by the PSBI M&E system based on the scale provided under each item. Enter N/A if the standard is not applicable or Don’t know if you are not sure	
E1	“Supporting documents are on-hand & accurate for indicator 1.”	
E2	“Supporting documents are on-hand & accurate for indicator 2.”	
E3	“Supporting documents are on-hand & accurate for indicator 3.”	
E4	“Supporting documents are on-hand & accurate for indicator 4.”	
E5	“Supporting documents are on-hand & accurate for indicator 5.”	
F	“Data Analysis and Use”	
	For each of the following statements, please score to what extent the standard is met by the PSBI M&E system based on the scale provided under each item. Enter N/A if the standard is not applicable or Don’t know if you are not sure	
F1	“The majority of data collected is reported”	
F2	“If client-level information is entered into a database then it is possible to analyze what services each person has received”	
F3	“Reasons for under- or over-performance (e.g. not achieving important targets) are documented”	
F4	“Performance issues (e.g. not meeting targets) are followed up with partners/others”	
F5	“Written procedures are in place to ensure regular (at least quarterly) review of M&E data by program/project managers and/or COP, M&E staff, other technical staff and partners”	
F6	“At least one data review & interpretation meeting has taken place in the last quarter at the national/program level involving managers and program/technical staff”	
F8	“Regular analysis includes trends in performance indicators over time (e.g. monthly or quarterly)”	
F9	“There is evidence that data analysis has led to improvements in program design or implementation”	
F10	“Donors and/or government have received an analysis report or attended a meeting with results presented - over and above minimum reporting requirements - within the last 12 months before the end of the study”	
F11	“Program/technical staff are familiar with key indicators and results pertaining to their program/technical area”	
F12	“A senior staff member (e.g. Program Manager) is responsible for reviewing aggregated data prior to release of reports from M&E unit”	
F13	“Monitoring data is accessible to relevant technical staff and manager(s)”	

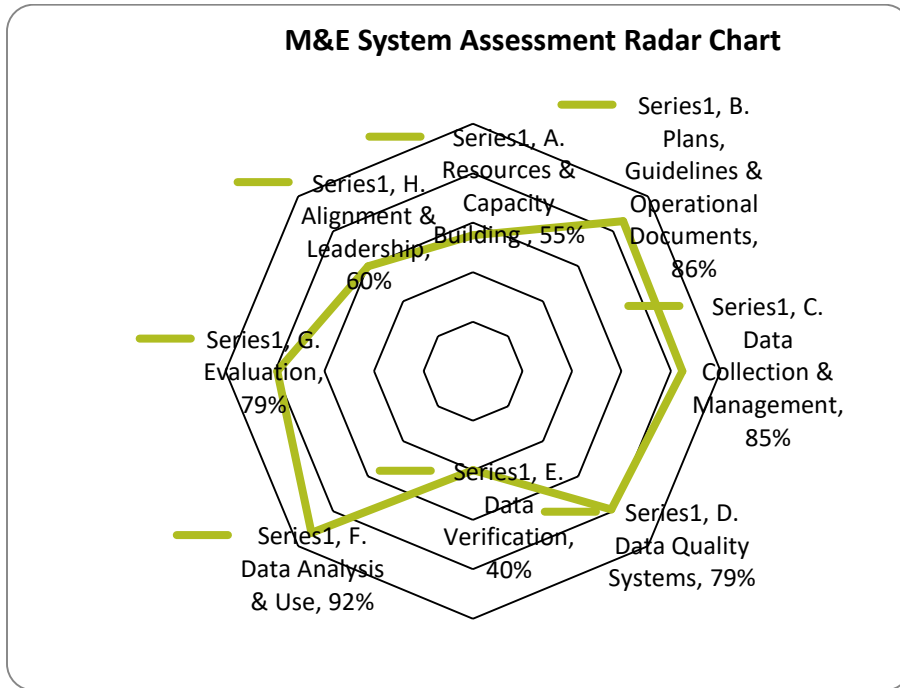
G	“Evaluation”	
	For each of the following statements, please score to what extent the standard is met by the PSBI M&E system based on the scale provided under each item. Enter N/A if the standard is not applicable or Don’t know if you are not sure	
G1	“Evaluation activities are explicitly outlined in the M&E plan”	
G2	“An outcome or impact evaluation is planned for the program(especially unique and large-scale programs)”	
G3	“A process evaluation or mid-term review has been conducted for projects which are ≥ 3 years into implementation”	
G4	“Baseline data is available within the first 2 years of project”	
G5	“Reports of any past evaluations are available”	
G6	“Findings from past evaluations have resulted in program improvements”	
G7	“Evaluation designs are adequately outlined in a protocol”	
G8	“Evaluation protocols include analysis plan, ethical provisions, budget and timeline”	
G9	“Relevant personal data are maintained according to national or international confidentiality guidelines”	
G10	“Evaluation results have been disseminated to all stakeholders”	
G11	“When evaluations have been conducted, local capacity has been built as part of the process”	
G12	“There is a mechanism in place for obtaining periodic feedback on service acceptability from beneficiaries/ target group members”	
H	“Alignment and Leadership”	
	For each of the following statements, please score to what extent the standard is met by the PSBI M&E system based on the scale provided under each item. Enter N/A if the standard is not applicable or Don’t know if you are not sure	
H1	“Indicators collected include those earmarked for the national program (government)”	
H2	“Reports have been submitted to the relevant government departments according to schedule”	
H3	“If applicable data have been reported through a single channel of the national system to prevent double-counting of program results”	
H4	“Data collection tools are aligned with those of the Government”	
H5	“Regular supervision activities are conducted to ensure activities are aligned with national/international standards”	
H6	“Program participates in national M&E TWG or other fora”	
H7	“Program participates in donor M&E TWG or other fora”	
H8	“Program has been used as a best practice/learning site for one or more M&E practices by donor or government”	

H9	“Program has been used as a best practice/learning site for one or more M&E practices by other (not supported) NGOs/CBOs/FBOs”	
H10	“Program has presented components of its M&E system at national conferences or other meetings in the last 2 years”	
H11	“Program has presented components of its M&E system at international conferences or other meetings in the last 2 years”	
H12	“One or more elements of Program’s M&E system have been published in peer review publications in the last 2-3 years”	

APPENDIX 3: SUMMARY OF THE SCORES

Program/Project Name:	Score		
	#	Max	%
A. “Resources & Capacity Building”	11	20	55
B. “Plans, Guidelines & Operational Documents”	24	28	86
C. “Data Collection & Management”	22	26	85
D. “Data Quality Systems”	30	38	79
E. “Data Verification”	25	50	50
F. “Data Analysis & Use”	24	26	92
G. “Evaluation”	19	24	79
H. “Alignment & Leadership”	12	20	60
TOTAL	167	232	72

APPENDIX 4: M&E SYSTEM ASSESSMENT RADAR CHART



APPENDIX 5: APPROVAL LETTER



UNIVERSITY OF NAIROBI
DEPARTMENT OF ECONOMICS, POPULATION AND DEVELOPMENT STUDIES

Telephone: +254-020-3318262 Ext.28122
Telephone: +254-20-4913206
Email: economics@uonbi.ac.ke
Website: economics.uonbi.ac.ke

P.O. Box 30197-00100 GPO
04 Harry Thuku Road
Gandhi Wing, Room GW 210
NAIROBI, KENYA

October 22nd, 2021

Executive Director,
Population Council, Kenya
C/O Principal Investigator, PSBI project
P.O. Box 17643-00500,
Nairobi, Kenya

Dear Sir/ Madam,

RE: DANIEL MWANGA- O51/35217/2019

This is to confirm that the above named is a Master of Arts in Monitoring and Evaluation degree student in the Department of Economics, Population and Development Studies University of Nairobi.

He is required as part of the study program to write an independent research project. He has chosen to study "*Assessing M&E System for the Possible Severe Bacterial Infection Implementation Research Project*" and will target staff and partners under the PSBI project."

Any assistance accorded to him is highly appreciated.

A handwritten signature in black ink, appearing to read 'Wambugu Anthony'.

Prof. Anthony Wambugu

Chairman,
Department of Economics, Population and Development Studies