MONITORING AND EVALUATION SYSTEM, STAKEHOLDER PARTICIPATION, ORGANIZATIONAL STRUCTURE AND PROVISION OF CURATIVE AND PREVENTIVE TUBERCULOSIS HEALTH CARE SERVICES IN PUBLIC HEALTH INSTITUTIONS IN KISUMU COUNTY, KENYA

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DECLARATION

This thesis is my original work and has not been presented for any academic award in any other university.

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DEDICATION

In loving memory of my parents the late Richard Oluoch and Josephine Atieno who were the source of my foundation, strength and inspiration. My utmost appreciation to my wife Valine Odinda and my daughter Stacy Josephine.

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TABLE OF CONTENT

Page

LIST OF TABLES

LIST OF FIGURE

LIST OF ABBREVIATIONS AND ACRONYMS

ANC	Absolute Neutrophil Count
ART	Antiretroviral Therapy
ASCH	Ahero sub county Hospital
CCW	Community Care Workers
CGHR	Centre for Global Health Research
CHMT	County Health Management Team
CSCH	Chulaimbo Sub County Hospital
DFID	Department of Foreign and International Development
DHI	Dutch Healthcare Inspection
DHMT	District Health Management Team
DHS	Demographic Health Survey
ECHI	European Community Health Indicators
EMAS	Eco-management and Audit Scheme
EPHS	Elmore Primary Health Service
FDA	Food and Drug Administration
GHE	Global Health Education
GIC	German International Cooperation
GOK	Government of Kenya
HBM	Health Belief Model
HCT	Hematocrit
HIV/AIDS	Human Immune Virus/Acquired Immune Deficiency Syndrome
HRHIS	Human Resources for Health Information System
HSS	Health System Strengthening
HTCI	HIV Testing and Counselling Institute
IPT	Inter Preventive Therapy
IPT	Immune Thrombocytopenia
JICA	Japan International Cooperation Agency
KEMRI	Kenya Medical Research Institute
KHPF	Kenya Health Policy Framework
KSCH	Kombewa Sub County Hospital
LDP	Leadership Development Programme
LF	Logical Framework

LFA	Logical Framework Analysis
M&E SYSTEMS	Monitoring and Evaluation Systems
M&E	Monitoring and Evaluation
MEHRDI	Monitoring and Evaluation Health Research and Development
MHISP	Mental Health Indicator Scheme Programme
MHSIP	Mental Health Statistics Improvement Programme
NGOs	Non - Governmental Organizations
NHIF	National Health Insurance Fund
NHSSP	National Health Sector Strategic Plan
NIS	National Institute of Statistics
NIST	National Institute of Standard and Technology
NPGH	New Provincial and General Hospital
NRC	National Research Council
NSCH	Nyando Sub County Hospital
PMTCT	Prevention of Mother to Child Transmission
RHM	Regional Health Management Team
SBR	System Based Regulation
SDHMT	Sub District Health Management Team
TB	Tuberculosis
UNAIDS	United Nations Program on HIV/AIDS
UNDP	United Nations Development Programs
UNFPA	United Nations Population Fund
UNMD	United Nations Millennium Declaration
US	United States of America
USAID	United States Agency for International Development
WHO	World Health Organization

ABSTRACT

Healthcare service provision is paramount and regarded as fundamental right of an individual. This study sought to establish how M&E system, stakeholder's participation and organizational structure influence on provision of curative and preventive tuberculosis health care services in public health institutions. It also sought to establish the intervening role of the stakeholder participation and the moderating role of organizational structure on the relationship between monitoring and evaluation system and provision of health care services in Kisumu County. This was done when there was an increasing demand of usage of M&E system in public health institutions accredited by the government. The study was significance due to the increasing demand, credible practice in the delivery of health care services. The study objectives was; to establish how human capacity for monitoring and evaluation influence provision of curative and preventive tuberculosis health care services in public health institutions in Kisumu County, to determine how logical framework influence provision of health care services in public health institutions in Kisumu County, to assess how monitoring and evaluation work plan influence provision of curative and preventive tuberculosis health care services in public health institutions in Kisumu County, to determine how data dissemination and use influence provision of curative and preventive tuberculosis health care services in public institutions in Kisumu County, to establish how combined monitoring and evaluation system influence provision of curative and preventive tuberculosis health care services in public health institutions in Kisumu County, to establish how the combined M&E system influence the provision of curative and preventive tuberculosis health care services in public health institutions in Kisumu County, to establish the intervening influence of stakeholder participation on the relationship between monitoring and evaluation system and provision of curative and preventive tuberculosis health care services in public health institutions in Kisumu County and to determine the moderating influence of organizational structure on the relationship between monitoring and evaluation systems and provision of curative and preventive tuberculosis health care services in public health institutions in Kisumu County. The study was guided by pragmatism paradigm. A descriptive survey design was employed in the study since it allowed collecting both quantitative and qualitative data and correlational design helped to test the hypotheses. Stratified random sampling was used in the study to obtain a sample of 221 from a population of 517 consisting of medical doctors, M&E officers, clinical officers, nurses and patients. A structured questionnaire with both open and close ended, with Likert type on 1-5 five point scale was used to collect data. Quantitative data was analyzed using descriptive and inferential statistics and data presented in frequency tables using means and standard deviations while qualitative data was presented in narrative form. Hypothesis was tested using linear regression at 0.05 level of significance to determine the degree and direction of relationships among variables. The study attained Cronbach Alpha of coefficient which was 0.6 and above for all items which was acceptable implying that the instrument was reliable. The results showed that human capacity for M&E (r^2=0.98, $p<0.05$), logical framework for M&E (r^2=0.98, $p<0.05$), M&E work plan (r^2=0.98, $p<0.05$) and data dissemination and use (r^2=0.98, $p<0.05$). Intervening stakeholder participation M&E system and provision of curative and preventive tuberculosis health care services in public health institutions had (r^2=0.98, $p<0.05$) and organizational structure, M&E system and provision of curative and preventive tuberculosis health care services in public health institutions had (r^2=0.98, $p<0.05$). The results showed that 60.3% (r^2= 0.0427, $p<0.05$ of provision of curative and preventive tuberculosis health care services was attributed to combined M&E system. The study results indicated that M&E system contributes significantly to the provision of curative and preventive tuberculosis health care services in public health institutions. The study recommends for future studies in private sector to establish the influence of M&E system and service delivery.

CHAPTER ONE
INTRODUCTION

1.1 Background to the Study

Health care services provision are paramount and regarded as a fundamental right of an individual globally millennium development goals (United Nations, 2000). Public health institutions therefore, are mandated to deliver health care services to the public which have been solely in the domain of the government due to its complexities and the nature of services offered (Aggarwal and Zairi, 1997). However, the broader health care service delivery has been faced with challenges that has negatively affected public health institutions not achieve its objectives. Rivers and Bae (1999) acknowledged that health care providers should guarantee effective delivery of healthcare services that satisfy the public. Therefore, it is significant for the public health institutions to realize the objectives of providing effective healthcare services that satisfy the public.

The global tuberculosis report is an annual event in which data is collected from all the 194 member state countries and territories. The World Health Organization is concerned with the tuberculosis global data that is controlled by tuberculosis monitoring and evaluation section (World Health Organization, 2017). In the year 2017, WHO collected data focused on; the TB cases notified and treatment score line among the type of TB, sex, age, HIV situation and the drugs capacity to resist; laboratory tests services, monitoring and evaluation such as observation and general view that is focused to TB drug resistant, TB prevention psychotherapy, TB control measures, involvement of the entire health providers public, private and Non-governmental organizations, the communal involvement, allocations on national TB control programmes (NTPs); the state in which the tuberculosis patients seek curative and preventive health services. A structured questionnaire online was used for high-income countries (WHO, 2017).

The health care services globally are regarded as significant and its vital role that has led to the recognition that calls for the strengthening of health care systems universally to achieve its objective (World Health Organization, 2008). In the period of time over thousand year objectives are focused to achieve a range of certain global health care programs namely, malaria, HIV/AIDS and tuberculosis are more importantly to the eradication of the disease through effective health programs to contain the diseases that are easily transferrable to other people. Therefore, it is necessary to have effective health system with the capacity to

efficiently deliver healthcare services (World Health Organization, 2007). Health system is the organization of people, institutions, and resources that deliver health care services to meet the health needs of target populations (World Health Organization, 2017).

Tuberculosis is a global menace was recorded in the year 2006 to have affected the largest number of the world population of 45% rate in Asia and 25% in Africa (World Health Organization, 2008). In the same year, 87% reported as the new cases in the already countries with the highest infections consisted of China, India, Indonesia, Philippines, Nigeria, South Africa and Pakistan. However, the world advancement through the process of curative and prevention tuberculosis in the most affected countries with an aim of eradicating the diseases. World health organization assembly recount on the implementation approaches that will be significant towards the fight against the tuberculosis epidemic. The report suggested further that the goal cannot be achieved but only through the increased political commitment, leading to financial investments appropriate anchored on policies and strategies that contribute to the intensification of research and development in order to identify new tools for diagnosis, treatment and prevention.

The UNAIDS, (2010) reported that South Africa infection rate of HIV/ TB stands at 17% and is positioned number five out of twenty two nations that are heavily affected with the TB/HIV infections rate between 75% - 80% mostly in parts of KwaZulu Natal province (Abdool Karim *et al,* 2009). Tuberculosis disease kills and infect people if not diagonized early enough for treatment leads to death (Maher, Borgdorff and Boerma 2005) more so, the HIV epidemic highly influence that impact of the widespread of disease (Corbett, 2006). On the front that face the TB epidemic through collaborations that ought to strategies on the health activities that results in the curative and preventive measures of TB especially in South Africa and sub Saharan regions are complex that leads to the spread of the disease (Maher *et al.* 2005) and in addition incapacities of health care services across the region (Covadia *et al,* 2009). The South Africa health systems are not adequate to handle the prevalence of the TB epidemic a cross the nine provinces and fifty two districts such that the health care offered is rated between 2.2% and 45% (Department of Health 2010). Nationally there are eighteen marked districts that are in dire need of thorough technical support, finances and leadership with good will to strengthen the health care system that would ensure effective outcome that addresses the epidemic.

In Kenya, tuberculosis survey report 2017 the survey focused on the assessment of the planning, objective in regard to the health behavior of TB patients, reported TB symptoms that informed strategy and policy formulation to curb the menace. The general view was anchored on digital platform with the objective of data collection and also application of the newly thought ideas of GeneXpert technology that tests TB (Global Health Education, 2017). The survey was conducted in the 45 out of 47 counties with 63,050 people screened for TB and were interviewed to ascertain the knowledge of any TB symptoms, chest x-ray were carried out and thereafter submission of species in laboratory scrutiny, GeneXpert machine (Global Health Education, 2017). The TB findings indicated that, the TB cases were higher than the previous year expected with the revelation of 558 affected in the midst of 100,000 in contrast to the World Health Organization (WHO) report in 2015, indicated those affected out of 100,00 to be 233.

The provision of curative and preventive of tuberculosis health care services therefore, is strategically an aspect that directly linked to the total quality management (Adinolfi, 2003). Delivery of curative, preventive measures health care towards tuberculosis can be achieved through the integrated health system which ensures the use of M&E system that are well set to coherently work separately but focused on to accomplish the intended purposes. However, systems complexities involves process of delivering quality health care may affect effective delivery of curative and preventive tuberculosis healthcare service delivery but, with the mitigation measures in place that guarantee institution objectives are attained.

Monitoring and evaluation system have potential cornerstone in strengthening health care system that effectively enhance the achievement of planned milestones. To account for the achievement of results, it is important in provision of evidence to inform correct decision making is anchored in M&E system. The insight to the management assures commitment and accountability for the inputs that guarantee the achievement of the expected results. It also provides opportunities at regular predetermined intervals that validate the logic of the health programme, activities and implementation with mitigation measures to accomplish the intended results. However, lack of monitoring and evaluation system in health care system contributes to difficulties in systematic monitoring of the information that provides critical input to evaluation leading to poor programme designs, planning and results.

1.1.1 Provision of Curative and Preventive Tuberculosis Health Care Services in Public Health Institutions

Health care services is referred as furnishing of health services provided for patients and populace that increases the probability achieving results that are in accordance alongside the health professional standards (Institute of Medicine, 2001). Despite of the definition, there are further elements that are constituted namely, structure, process and outcome that affirm on the quality health care provision (Donabedin, 1996). The health care system plays a significantly part in strengthening of provision of curative and preventive of tuberculosis health care services (World Health Organization, 2007). The delivery of curative and preventive of tuberculosis health care objectives by millennium development goals is to eradicate disease through effective health care programs focused on infectious diseases which significantly rely on the capability of the essential health care delivered (World Health Organization, 2007).

Nevertheless, health care system consists of interrelated building blocks, service delivery, adequate field performing work force, and maintained functioning health information system, adequate provision of finances, vaccines, technologies, effective leadership and financing. Public health care is a fundamental concept that largely depends on the effective health system as the societal collectiveness that contributes to the well-being of its people regardless of the condition that affects them" (Committee for the Study of the Future of Public Health, 1988). Therefore, health care providing institutional objectives should be in line with health programme activities that are geared towards effective provision of curative and preventive tuberculosis health care services that meets the expectation of the patients.

1.1.2 Monitoring and Evaluation System

Monitoring and evaluation system refers to all indicators, tools and sequence of governance, repetition and a series of event that produces a result that makes a firm and systematic and effective gathered information (Nigel, 2009). Monitoring and evaluation system represents inclusiveness of the undertaken activities before and after implementation of a program with the view of tracking and measuring the process of achieving the desired goal. Monitoring and evaluating system is significant in health care programs that contribute in formulating effective delivery of health care services to clients (Seasons, 2003). Therefore, monitoring and evaluation system when utilized maximum meeting demanded health care projects hence achieving the intended purpose (Woodwill, 2005). Gorgens and Kuseck, (2010)

asserts that despite of the commonly applied use of monitoring and evaluation, these are two entities that have differently approach though work coherently together.

The study was focused to find out how M&E system influence provision of curative and preventive tuberculosis health care services against intended objectives. The indicators M&E system systematically work independently but focuses on the implementation of the health care activities that would certainly contribute to the achievement of effective provision of curative and preventive of tuberculosis health care services (Samdi, 2007). Monitoring therefore, being a continuous process that is purposeful tasks with the responsibility that ensures that the activities results contribute to achieve the intended objectives. It further ensures that the health care system are improved to the standards that guarantee efficiency in providing satisfied health care services to the public. Monitoring will ensure that the processes to improve the health sector are adhered to through examining the circumstances and the plan and to what extent to factor in suitable inputs, procedures that will ensure that the outcome is achieved.

Monitoring further ensures that input indicators such as resources are utilized as planned in the process of applying these resources impact the output objective of provision of health care services. Evaluation exercises are focused to assure in the achievement of the planned objectives therefore, it checks on the health care system plan and to extent to which the intended plans are able to improve the equality, fairness, effectively and sustainable provision of curative and preventive of tuberculosis health care services. Evaluation ensures that despite of the complexities that may occur during the implementation, there are administrative task that has to be in place that contributes immensely in achieving the quality (Woodhill, 2005). More studies today revealed that evaluation of results is a major step of the way forward to improve organization management through their practices that will help in achieving its objectives in addition, a wider knowledge is generated (UNDP, 2002).

A monitoring system uses indicators to measure the progress of a project (Kidombo, Gakuu and Keiyoro, 2013). This is experienced through the involving the inputs which are used to in the process of the activities, the outcome that is yield from the action intended to yield the expected outcome of the health project. The literature indicates that indicators that results in measuring of the performance and more importantly, it shows the project owners

the milestones made in the project as planned (Kidombo, Gakuu and Keiyoro, 2013). Indicators further will show the milestones that the public health institutions will employ that contribute to achieve the intended purpose of providing curative and preventive of tuberculosis health care services to patients.

The Kenyan government has acknowledged the significance the M&E system provides for as basic fundamental in accountability mechanisms in service delivery (Constitution of Kenya 2010). It further enable Ministry of Health to progress, respond to sustainability driven technologically, evidence-based and clients focused health system to hasten the effort of the required threshold health for all in a devolved system (Devolution and Planning Docket, 2012). The docket has nationally established a monitoring and evaluation standard principle aligns and coordination of various health sectors appropriate to strengthen the unit. The ministry of health has established health committee on health to deliberate on the modalities on M&E system that will effectively contribute to better delivery of healthcare services to the public. M&E integration in health activities with detailed engagement of the stakeholders contribute immensely in achieving the intended purpose (Government of Kenya, 2008).

The health sector adoption of M&E system tools that are of high quality data which are essential to all public health programs, measure evaluation has developed many tools to strengthen health information system. Health system strengthening resource provides advice and direction on how to set up monitoring and evaluation system and learning processes. These processes track progress in health systems strengthening, generate evidence on effectiveness of health system strengthening interventions, and use that evidence for continuous learning and better programming (Aqil, Silvester and Maniscalcol, 2017). Health systems indicators plays an important role of monitoring, evaluation and learning processes and this compendium presents the wide array of indicators that can be used to monitor progress that assures of effective provision of health care services. Measuring progress in strengthening health care programs requires careful planning and sound metrics to assess changes in how health system function and perform (Diana, Yeager, and Hotchkiss, 2017). Health system strengthening has become part of Kenyan government and their international partners to scale up the availability and use of priority health services that responds to needed services to the population (Ministry of Health, 2014).

There are standards and procedures developed towards the operationalization of health sector under adoption of M&E framework setting up durable and formidable standards. The fundamental objective of M&E on health care is to enhance delivery of health services at all levels of government (Ministry of Health, 2015). The health care services provision receives a major boosts through donor support and technical oversight to ensure that the health care program objectives are achieved. The USAID support on measure evaluation PIMA projects together with other partners who provided invaluable technical support and financial resources towards the development of monitoring and evaluation guidelines on designated to certain that integration of M&E system on health care is affirmed (Ministry of Health, 2015). The component of M&E is significant in ensuring the improvement of service delivery to the beneficiaries that meet the intended needs. Therefore, the concern of effective health care system that contributes efficiently implementing the health care programs that meet the set objectives.

The sound M&E system that is functional, organization structure, staffing and stakeholders that ensure that there is improved system that leads delivers quality health care services to patients. The M&E system is significant since it ensures accountability and the design of a shared institutional vision for efficient and standardized delivery of quality health care services. The designed system corresponds to the intended purposes that enables basic tools and directs on how to assess M&E capacity as an initial step towards priority determination and address the needs that improves health care service delivery. The establishment of M&E function in health care institutions structural set up contribute to the identification of the necessary skills that utilizes the resources for core health activities to be initiated in the health sector that aid in achieving the institutional objectives.

The Kenyan government proposed structures that incorporates M&E system that embraces adequate of skilled and experienced human resources that are significant with an operational element that should comprise a minimum of five persons including, a manager, health information manager, a statistician, researcher and a socialist expert that would be able to deliver the set objectives. Based on decentralization of healthcare services, M&E team at the county are tasked to manage the county and sub county levels of health care which should comprise of the coordinator, health information officer and health economist. The other health facilities at the county level should have a full health manager concerned with

the coordination health care activities to the clients (Ministry of Devolution and Planning, 2011).

The health care organizations within a civil society such as HeNNET proposed to develop M&E unit that is concerned with service delivery to clients that reflects the M&E sector at both the county and county levels (Government of Kenya, 2009). The M&E activities should be spread across the country through a well elaborate health care system focusing on efficiency. Nonetheless, the private entities are expected to adhere to M&E system in ensuring that at both levels of government health care activities are well coordinated with focus to achieve the intended objective (Ministry of Health 2015).

1.1.2.1 Human Capacity for Monitoring and Evaluation

The human capacity for M&E can be referred as the state of skilled and ability of human resources in an organization or society that work to meet the intended purpose (Organization for Economic Cooperation and Development, 2013). It is a fundamental component that contributes to a greater extent to ensure that health care activities are executed to deliver effective curative and preventive tuberculosis health care services that contributes towards achieving the desired outcome. Therefore, human resources capacity for health are significant in ensuring efficiency on provision of curative and preventive curative and preventive tuberculosis care services to patients. However, delivery of curative and preventive tuberculosis health care service are faced with challenges where the human resources lack M&E skills that is useful in the implementation of the relevant activities hence creates the barrier in discharging curative and preventive tuberculosis health care services to the tuberculosis patients as required (Buchan, 2004).

The human resources for monitoring and evaluation are important in assuring the health care activities carried out with utmost concern and effective delivery of curative and preventive tuberculosis health care services are achieved (WHO, 2006; Knifu, Dal Poz and Mercer 2009). It's significant to acknowledge that health care services are effectively delivered at all levels of government (WHO, 2006). The skilled, experienced M&E human resources are familiar with the monitoring and evaluation health activities which are instrumental in gaps identification and mitigation strategies to be adopted that contributes to effective delivery of curative and preventive health care services to tuberculosis patients.

1.1.2.2 Logical Framework for Monitoring and Evaluation

Logical framework is referred as a device for formulating, managing and developing of projects (Taylor, 2003). The logical framework for M&E is an essential tool that contributes in strengthening plan instrumental for M&E of a project. It is vital in developing and managing the processes involved during the implementation of health care activities that will ensure that objective of providing curative and preventive tuberculosis health care services to the patients is achieved. The framework entails detailed information that is meant to assist management in planning on how to undertake the various activities that empower the health institutions to actualize on achieving the intended objectives (DFID, 1997). The logical framework further will be significant for planning, implementation and sustaining of the health programs and the basis to which success is guaranteed.

Logical framework further assures certainty in the implementation of health programs that the institutions are undertaking with the aim of achieving the intended results. Logically, the health programs are evaluated promising to give effective health care services expected to patients. Logical framework aspect of evaluation creates confidence to health practitioners that the services provided will be of great significance in items of meeting the demands of the dire needs of the patients. (Bornstein, 2006) acknowledges that the logical framework immensely contributes significantly to projects and therefore, this will enable the health professionals implementing the health care activities to accomplish them.

The logical framework does not accommodate the complexities uneven arrived at which could derail the progress of work rather it focuses on the program activities that ensures implementation as planned. The health practitioners therefore, set the goals of the health program to be implemented and its provision to the patients with an expectation to meet the desired needs. To attain this, the public health practitioners has to draw a clear process of which the health programs are detailed and activities involved that guarantee an effective delivery of curative and preventive tuberculosis health care services to patients. Chen *et al*., (2004) acknowledge that logical framework policy is made up of coverage, motivation and competence that intervene and strengthen these attributes resulting in improved provision of curative and preventive services for the tuberculosis patients.

1.1.2.3 Monitoring and Evaluation Work Plan

This can be referred to a guide to task the M&E work force to commit to the entire lifespan of the intended endeavour. It defines goals and objectives, activities, methods and M&E designs, resources that are required to implement what is expected to achieve the desired goals within the time frame of the project completion (Knowledge for Health, 2015). M&E work plan enhances the organizations to effectively and efficiently work with the focus to achieve the intended set objectives. Therefore, for the public health institution to achieve its objectives, monitoring and evaluation work plan is paramount since it ensures that resources are located for the M&E activities that ranges between five and ten percent of the program budget (Global Fund's Periodic Review 2012-2016). The cost inclusion of the monitoring and evaluation activities reflects health project activities that are expected to be consistent to ensure that allocated funds are utilized and accounted for appropriately.

This will guarantee adequate implementation of M&E work plan activities flows as planned hence achieving the expected outcome. M&E work plan of health care, activities are outlined against resources allocation, implementation against provision of curative and preventive services for the tuberculosis patients hence achieving the intended outcome. The health work plan leads to the improvement of health care activities to be achieved in terms of outlining the human resource allocation in respective of the work distribution, the duration of the various activities to be accomplished to reassure of realization of the set objectives. The M&E work plan lists out the activities that need to be accomplished within a set duration, outlining fundamental questions and indicators monitoring, review and update that enables changes that occurs during the program implementation to be factored. The M&E work plan demonstrates its significance that ensure work efficiency, transparency and accountability in expenditures therefore, all the activities that are undertaken be subjected to the work plan.

1.1.2.4 Data Dissemination and Use

Data dissemination and use can be referred to as distributing or transmitting statistical data to users (Organization for Economic Cooperation and Development, 2013). Data dissemination and use can be viewed as transmission of data collected in regard to specific area of need to the end users. The data dissemination and use as an indicator is necessary in ensuring data collection is done from the right source, relevant and credible for use. The data collected will ensure that the health project activities are pertinent to monitoring and

evaluation system for the intended purpose. Gebremedhin, Getachew and Amha, (2010), indicated that data disseminated is significant in developing health care in the sense that it will ensure that the planned activities are certain of the effective on provision of health care services. Data sourced from the medical records is significant since it assesses the patients indicating the strengths and weakness that needs to be maintained or improved on provision of curative and preventive tuberculosis health care services delivery to the patients as planned.

The data disseminated for use provides a requisite that is vital for provision of curative and preventive tuberculosis health care activities that can be improved to certain the desired results. The data further help in prioritizing and guiding on the modality on how the curative and preventive of tuberculosis menace can be improved. Data indicators enables the health practitioners to reflect on the capacity, timelines and periodic schedules that are key on ensuring that delivery of curative and preventive health care activities are realized that can meet the intended purpose. Further, the data gathered helps in provision of curative and preventive of tuberculosis which is significant in indicating the trends of occurrence over time that can be aligned with the existing situation hence help in identifying areas to be improved that will ensure effective curative and preventive tuberculosis health care services are provided to the patients. The data disseminated for use may unveil fundamental areas that might have been neglected and negatively affects the institution in achieving its objectives.

1.1.3 Stakeholder Participation

Stakeholder participation has been defined differently by scholars; (Engi and Glicken 1995) refers to an individual, group or an organization with legitimate interest that has significant influence directly or indirectly to the project. Further, Lewis (2011) refers to a stakeholder as a person holding the stakes of bettors, with the responsibility towards achieving organizational objectives. Therefore, the study stakeholders inclusivity in regards to the roles played by different stakeholders that contribute to effective provision of curative and preventive tuberculosis health care services to patients in public health institutions.

Participation by project stakeholder increases confidence and interests in the project greatly however, over emphasized though the organizations have different categories of stakeholders and each contribute diversely to achieve the set goals (Freeman, 1984). The

legitimization of the stakeholder can adversely impact the organization regardless of the managerial decision made. The stakeholder's participation in delivering necessary inputs on health care activities that are varied hence contributing effectively on provision of curative and preventive tuberculosis health care services to patients.

In neighboring Uganda, the study indicated the importance of the wider scope of health care that collectively is advantageous to the country's population as evidence of dedicated stakeholder participation that significantly influence the health sector to achieve its objectives. This is through acquiring of qualified staff, staff training to improve on efficiency in delivery of services that is anchored to the organizational focus. This is as a result of similar studies done by (Xiaojin, 2006) therefore, results to the basis of this research rather than generalization but to establish the intervening influence of stakeholder participation on the relationship between monitoring and evaluation system and provision of curative and preventive tuberculosis health care services in public health institutions.

1.1.4 Organizational Structure

This refers as a layout in which the organizations work is structured. It defines every work, officially designated role in its existence in organizational set up (Friedman, 2006). Organizational structure is a concept normally thought to be the entire outlay of the organization based on the different set ups that perform separately as an independent unit with the common goal to achieve the organizational objectives as a whole (Ogolla, 2012). Public health institutional structure is significant in ensuring that health care activities that contribute to effective provision of curative and preventive tuberculosis health care services to the patients. The management responsibility therefore ensures that, health care activities are undertaken that delivers effective curative and preventive tuberculosis health care services as required.

The health care functions are entrenched in the organizational structure which ensures that the members of the organization thus organizing the co-ordination of various health care activities so that they are all directed towards achieving effective delivery of curative and preventive of tuberculosis health care services to patients. Higgins, (2005) acknowledges the components of organizational structure as the work done by the management way down to subordinates in a systematic manner with manageable span of control and the coordination mechanism of those jobs. Therefore, when executing a technological work

plan, the organizational structure must be considered relevance to the plan (Bhat, Verma and Rangneka, 2012).

The organizational structure therefore contributes to the basis of the investigation to the study. The study focused on roles of the organizational structure in ensuring that there relevant organizational strategies in place to achieve organizations set objectives (Robbin and DeCenzo, 2005). Further, studies indicated that organizational structures that are flexible enhance a greater participation of stakeholders which improves on the provision of curative and preventive tuberculosis health care services and more so, control health care measures to the tuberculosis patient's (Maffei and Meredith, 1995). Tarigan, (2005), suggested that organization structures moderating variable contribute significantly to provision of tuberculosis curative and preventive health care services.

1.1.5 Public Health Institutions Offering Curative and Preventive Tuberculosis Health Care Services in Kisumu County

The government of Kenya (GOK, 1994) gazette Kenya health policy framework (KHPF) that will benchmark development, management and sustenance of country's health care services. It stipulates long term health care strategy and the requirement for the health systems in Kenya. The implementation process was steering headed by the gazette health policy framework guiding in the process purposed to enhance health sector department and to ensure of intended results. The health policy was focused to mitigate the following challenges namely, the decrease of expenditure, in efficient use of resources, making choices centered, equality in managing of the information systems, lack of managerial skills, poverty levels, increase of diseases and steady population growth.

The inception of the new constitution poses health care as basic right that every citizen is entitled to and therefore, the reforms initiated in the devolved system that is aimed to equitable providing health care services that are accessible as indicated in the Constitution of Kenya (2010). Due to the decentralization, the supervision is under the county health management team (CHMT) and the management supports the referral, county and sub county levels of public health institutions within the County. The study was focused in Kisumu following the strategic location of the center for global health research (CGHR) under Kenya medical research institute KEMRI in an area that is characterized with the major instantaneously acquired like HIV/AIDS, malaria and tuberculosis. However, the

study focused on the public health institutions at the sub county level which had the similar organizational structure and also an intervening variable of the study and functioning M&E system and to what extent it influences provision of curative and preventive tuberculosis health care services. Kisumu county boast of 123 public health facilities which consists of teaching and referral hospital, county hospital, six sub-county hospitals, seven NGOs, sixteen faith based and twenty eight private health care facilities.

Kisumu County has a population of appropriate 980,909 according to the 2009 national census covering 2085.9 km^2. It stretches to its all surrounding from the escapement in Nandi to the east of Kano plains. The county climate condition is influenced by the presence of Lake Victoria that enables the County to receive a relief rainfall that ranges between 1200mm-1300mm across the entire county. The area is characterized with two seasons of rainfall that allows the place to experience warm temperatures all the year around with a mean temperature estimated to be 23^0c. However, the temperature ranges throughout the seasons between 20^0c-30^0c but 19^0c low thus makes the area experience high humidity. Kisumu economic background is much invested in fishing though there are other involvement on other activities like agriculture and industrial. At the shore of Lake Victoria fish became major financial activities that community members engage in for a living.

The 2012 to 2013 Kenya's health policy had proposed for establishing the County's health subdivisions which will particularly assure that the provision that would enable the institutions and management structure charged with the responsibility that will enhance coordination, control in effective provision of curative and preventive tuberculosis health care services. However, the study only focused on the public health institutions with working monitoring and evaluation system in delivery of curative and preventive tuberculosis health care services to the clients. Kombewa being a sub county hospital that offers general health care services to sub-county residents. It also offers curative, preventive and diagnosis of tuberculosis amongst other health care services clients that formed the foundation of this study. Nyando is a sub county hospital that offers health care services to public with capacity of 20 beds. The institution qualified as a unit of the study on the basis on provision of diagnosis, curative and preventive of the disease. Chulaimbo district hospital with the capacity of 26 beds and is characterized with the delivery of curative and preventive and diagnosis of tuberculosis health care services among other health care and Ahero sub county hospital which is located few kilometers from Kisumu county headquarters has a

bed capacity of 24 for the inpatient and also forms the unit of study based on its provision of curative and preventive tuberculosis health care services.

1.2 Statement of the Problem

Monitoring and evaluation system are instrumental in health care system that contributes to the process of transforming the required ideas of health activities to reality for effective delivery of curative and preventive tuberculosis health care services to the public. Considering the significance of the demand of health care services, M&E system are integrated to enhance health care activities with results that meet the objectives of the public health institution to deliver effective curative and preventive tuberculosis health care services. However, creating effective monitoring and evaluation system is paramount that ensure curative and preventive tuberculosis health care activities are effectively implemented that satisfy public demands.

The government commitments to finance public health institutions so as to guarantee the achievement of the intended objectives of effective health care services is delivered to the public are achieved since it contributes to the economic well-being of the state. However, David, (1999) revealed that the public does not have much trust in the health care services provided by the public health institution since they do not guarantee the expected results to the public. This is due to the absence obligation and transparency in implementing health care programs that has resulted to the mismanagement of funds resulting to inferior provision of curative and preventive tuberculosis health care services that does not meet the client's expectation.

The intention was to study the intervening of stakeholder participation on the relationship between monitoring and evaluation system and provision of curative and preventive tuberculosis health care in institutions was significant in ensuring that the accountability of the public health management institutions adhered to the laid plan that contribute to the effective delivery of health care services to the patients in Kisumu County. The moderating influence of organizational structure on the relationship between monitoring and evaluation system and provision of curative and preventive tuberculosis health care was fundamental in enabling the management support of the ongoing health programs, financial and goodwill which was to ensure that the residents of Kisumu County are provided with adequate health care services. Consequently, the study seeks to inquire the influence of monitoring and

evaluation system on provision of curative and preventive tuberculosis health care services in public health institutions in Kisumu County.

1.3 Purpose of the Study

The purpose of the study was to investigate the extent to which monitoring and evaluation system, stakeholder participation, organizational structure influence provision of curative and preventive tuberculosis health care services in public health institutions in Kisumu County, Kenya. The study also examined the intervening and moderating influence of stakeholder participation and organizational structure on their relationship between M&E system and provision of curative and preventive tuberculosis health care services in public health institutions in Kisumu County.

1.4 Objectives of the Study

This study was guided by the following objectives:

i. To establish how human capacity for monitoring and evaluation influence provision of curative and preventive tuberculosis health care services in public health institutions in Kisumu County, Kenya
ii. To determine how logical framework influence provision of curative and preventive tuberculosis health care services in public health institutions in Kisumu County.
iii. To assess how monitoring and evaluation work plan influence provision of curative and preventive tuberculosis health care services in public health institutions in Kisumu County.
iv. To determine how data dissemination and use influence provision of curative and preventive tuberculosis health care services in public health institutions in Kisumu County.
v. To establish how the combined monitoring and evaluation system influence provision of curative and preventive tuberculosis health care services in public health institutionsin Kisumu County.
vi. To establish the intervening influence of stakeholder participation on the relationship between monitoring and evaluation system and provision of curative and preventive tuberculosis health care services in public health institutions in Kisumu County.
vii. To determine the moderating influence of organizational structure on the relationship between monitoring and evaluation system and provision of curative

and preventive tuberculosis health care services in public health institutions in Kisumu County.

1.5 Research Questions

The study sought to answer the following research questions:

i. To what extent does human capacity for monitoring and evaluation influence the provision of curative and preventive tuberculosis health care services in public health institutions in Kisumu County?

ii. How does logical framework influence the provision of curative and preventive tuberculosis health care services in public health institutions in Kisumu County?

iii. To what extent does monitoring and evaluation work plan influence the provision of curative and preventive tuberculosis health care services in public health institutions in Kisumu County?

iv. How does data dissemination and use influence the provision of curative and preventive tuberculosis health care services in public health institutions in Kisumu County?

v. How does combined monitoring and evaluation system influence the provision of curative and preventive tuberculosis health care services in public health institutions in Kisumu County?

vi. What is the intervening influence of stakeholder participation on the relationship between monitoring and evaluation system and provision of curative and preventive tuberculosis health care services in public health institutions in Kisumu County?

vii. What is the moderating influence of organizational structure on the relationship between monitoring and evaluation system and provision of curative and preventive tuberculosis health care services in public health institutions in Kisumu County?

1.6 Research Hypotheses

The study sought to test the following research hypotheses:

1. **H_0** Human capacity for M&E has no significant influence the provision of curative and preventive tuberculosis health care services in public health institutions in Kisumu County.

   H_1 human capacity for M&E significantly influences the provision of curative and preventive tuberculosis health care services in public health institutions in Kisumu County.

2. **H_0** Logical framework has no significant influence the provision of curative and preventive tuberculosis health care services in public health institutions in Kisumu County.

   H_1 Logical framework significantly influences the provision of curative and preventive tuberculosis health care services in public health institutions in Kisumu County.

3. **H_0** Monitoring and evaluation work plan has no significant influence the provision of curative and preventive tuberculosis health care services in public health institutions in Kisumu County.

   H_1 Monitoring and evaluation work plan significantly influence the provision of curative and preventive tuberculosis health care services in public health institutions in Kisumu County.

4. **H_0** Data dissemination and use has no significant influence the provision of curative and preventive tuberculosis health care services in public health institutions in Kisumu County.

   H_1 Data dissemination and use significantly influence the provision of curative and preventive tuberculosis health care services in public health institutions in Kisumu County.

5. **H_0** Combined Monitoring and evaluation system has no significant influence the provision of curative and preventive tuberculosis health care services in public health institutions in Kisumu County.

   H_1 Combined Monitoring and evaluation system significantly influence the provision of curative and preventive tuberculosis health care services in public health institutions in Kisumu County.

6. **H_0** Stakeholder participation has no significant intervening influence the relationship between monitoring and evaluation system and provision of curative and preventive tuberculosis health care services in public health institutions in Kisumu County.

   H_1 Stakeholder participation significantly intervening influence the relationship between monitoring and evaluation system and provision of curative and preventive tuberculosis health care services in public health institutions in Kisumu County.

7. **H_0** Organizational structure has no significant moderates the relationship between monitoring and evaluation system and provision of curative and preventive tuberculosis health care services in public health institutions in Kisumu County.

H_1 Organizational structure significantly moderates the relationship between monitoring and evaluation system and provision of curative and preventive tuberculosis health care services in public health institutions in Kisumu County.

1.7 Significance of the Study

The study hopes that the results may be beneficial use for the County management committee on health care addressing key public health care system and health policy challenges, with the move to pursuit for better provision of curative and preventive of tuberculosis health care services Kisumu County. The research outcomes may be significant for the Kisumu county director for health care services with the determination that seeks to reinforce public health potential to deliver curative and preventive tuberculosis health care services in public health institutions. More so, to review effectiveness of the key available public health and public policy challenges concerned with curative and preventive measures of cancer within the County.

It is also hoped that, may be useful in the renewal on the public health capacity, function and services to ensure that there are efforts in the delivery of curative and effective determination that may help in curative and preventive tuberculosis diseases among the residents of Kisumu County. The study was hopeful that the outcome may provide the county ministry of health with the insight that presents a framework action that will help in strengthening public health capacities and provision of curative and preventive of tuberculosis health care in public health institutions to public. Further, the framework may as well provide a particular approach to the public health institutions management teams that demonstrate the concept of improving curative and preventive tuberculosis health care services to the patients against the existing public health capacities and services that would lead to the formation of a much effective public health function in the county.

Monitoring and evaluation capacities in health care services as a result of the study may be significant in informing policy making, resource allocation and strategic development for promoting curative and preventive of tuberculosis health care services that meets county residents expectations. The county public health management teams the mandatory aspect of initiating and informing the health governance discussion at all levels of public governance hence to advocate for policies and actions that will ensure that the curative and preventive tuberculosis health care services are improved. The study results is believed to

unveil the broadly appraisal of health necessities required and a measure to sustain health gains in the county thus enabling health management board teams to strategically plan and improve on the areas that deem necessary. The study therefore, was significant in the perspective that ensures effective curative and preventive tuberculosis health care services that satisfy patients are in place.

1.8 Limitations of the Study

The access of public health institutions to gather data may encounter resistance due to suspicion of the intended mission. However, the researcher sought the permit from the national commission for science, technology and innovation that enabled the study to be conducted without any form of suspicion that led to the conducive environment for gathering the needed information. The study respondent's perceptions may differ regarding a certain aspect of the study that would not make generalization possible. However, the researcher advised the respondents to be realistic to their answers.

Some respondents found it difficult to fill in the questionnaire due to phobia of victimization that might affected their work. However, the researcher pledged to respondents anonymity and that data collected to be used for academic purpose. However, the limitations experienced did not affect the objective of the study since research was a systematic and scientific that investigates into the study in order to establish facts, conclusions and to discover new knowledge.

1.9 Delimitation of the Study

The study was interested to investigate how monitoring and evaluation system components namely; human capacity for M&E, logical framework, M&E work plan and data dissemination and use influences provision of curative and preventive tuberculosis health care services in public health institutions. Although M&E system has 12 components namely, organizational structure, human capacity for M&E, logical framework for M&E, M&E work plans, data dissemination and use, evaluation and research, supporting supervisory and data auditing, devolved databases, survey and surveillance, routine program monitoring, conveying, support and collective M&E and partnership for formulating in line with M&E system. Consequently, the study zeroed in only in the following variables namely; human capability for M&E, logical framework for M&E, monitoring and evaluation work plan and data dissemination and use which were was applicable in the

delivery of health care services. The intervening role of stakeholder participation on the relationship between monitoring and evaluation system and provision of curative and preventive of tuberculosis health care services to the public was investigated. The study also assessed inquires on the moderation influence of organizational structure in connection between monitoring and evaluation system and provision of curative and preventive of tuberculosis health care services to the patients. The study was restricted in public health institutions which are financed by the government and also have monitoring and evaluation system in place in Kisumu County however, the private and NGOs health institutions which had monitoring and evaluation system were not considered in this study because of their different entity.

1.10 Assumption of the Study

The study assumption was that M&E system components employed in this study influence provision of curative and preventive tuberculosis health care services in public health institutions. The study assumptions was based on human capacity in M&E were skilled and motivated work force were expected to provide satisfied health care services, logical framework was essential in ensuring that M&E are carried out systematically, M&E work plan contributed to effective and timely decision which makes the required information for monitoring and evaluation from regular and planned M&E agility, data dissemination and use provide feedback that was delivered to the targeted recipients that was to ensure progress towards results are gathered, reviewed and used in program, stakeholder participation in M&E is able to produce effective in mobilizing supplemental resources to bridge the gaps and that assured effective provision of curative and preventive tuberculosis health care services in public health institutions and organizational structure to ensure that the necessary support from the management are provided towards health care program objectives.

1.11 Definition of Significant Terms used in the Study

Data dissemination and use; These are acquired data and transmitted to the end users which are significant for planning and formulation of health care policies which comprise of data source, data accuracy, M&E duration and reliability of data collection instruments that was to be used in providing valuable data for the provision of curative and preventive health care services to patients in public health institutions.

Human Capacity for M&E; This can be termed as individual's suitability to perform certain tasks effectively and efficiently as required that includes, skilled M&E staff, staff

training on M&E, technical ability on M&E and work allocation on different M&E areas that was essential in ensuring effective provision of curative and preventive tuberculosis health care services in public institution satisfy the public.

Logical framework for monitoring and evaluation; can be termed as the relationship between the program inputs, activities undertaken through the following, indicators choice, knowledge use on logical framework, planning on how to employ logical framework and mitigation measures to ensure the implementation of monitoring and evaluation systematically to achieve the results.

Monitoring and Evaluation System; composed of the components which include, human capacity for M&E, logical framework, M&E work plan and data dissemination and use that was integrated in the provision of effective tuberculosis and preventive tuberculosis health care services in public health institutions.

Monitoring and evaluation work plan; this comprise of the developed template with a clear indicated work plan incorporating financial resources for facilitation and implementation, time frame to achieve work intended, program sequences as planned, plan review and work schedule to ensure that public health institutions achieve the set objectives of providing effective health care services to the patients.

Organization structure; refers to the relationships and work roles amongst positions in the organization and among members of the organization and factors through was incorporated in the public health institutions management which can either be centralized, flexible, decentralized or complex to ensure the set objectives are achieved through support that will results in the effective provision of curative and preventive tuberculosis health care services to the patients.

Provision of Curative and Preventive Tuberculosis Health Care Services; these are health care services provided to tuberculosis patients by the health providers to cure, prevent and maintain health status. It consists of the following indicators namely, accessibility, diagnosis, prevention, treatment, quality, continuity and person centeredness that was influenced by M&E system to ensure that there will be significant contribution and improvement in delivery of the needed curative and preventive tuberculosis health care services.

Stakeholder participation; can be referred as a group of individuals and organizations which has either direct or indirect interests in the program that was influential in ensuring that decision making, planning, empowerment and consultancy services provided guides the program to achieve the public health institutions intended objectives.

Tuberculosis; is a disease caused by bacteria mycobacterium tuberculosis that most often affect the lungs that is spread from one person to another through the air when, people with lung TB cough, sneeze or spit, they propel the TB germs into the air.

1.12 Organization of the Study

The study was organized in five chapters where; chapter one contains, introduction, background to the problem where all variables are explained, the statement of the problem, the purpose of the study, the objectives of the study, the research questions and hypothesis, the significance of the study, assumptions, limitations, delimitations and definition of significant terms used in the study.

Chapter two of the study reviews literature on each theme of objective as follows, provision of curative and preventive tuberculosis health care services, monitoring and evaluation system, human capacity for M&E and provision of curative and preventive tuberculosis health care services, logical framework M&E and provision of curative and preventive tuberculosis health care services, M&E work plan and provision of curative and preventive tuberculosis health care services, data dissemination and use and provision of curative and preventive tuberculosis health care services, M&E system and provision of curative and preventive tuberculosis health care services in public health institutions, stakeholder participation, M&E system and provision of curative and preventive tuberculosis health care services, and organizational structure, M&E system and provision of curative and preventive tuberculosis health care services. The conceptual framework, summary of literature review and theoretical framework and knowledge gaps. Chapter three describes the research paradigm, the research design, the target population, sample size and sampling procedure, research instruments, pilot testing of instruments, validity of instruments, reliability of instruments, data analysis techniques, ethical considerations and operationalization of the variables. Chapter four contains the data analysis, presentation, interpretation and discussions. Chapter five contain summary of findings, conclusions and recommendations. Areas for further research and contribution to body of knowledge.

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

This chapter reviews empirical and theoretical literature related to the study based on the following thematic areas. Provision of curative and preventive tuberculosis health care services in public health institutions. The concept of monitoring and evaluation system, human capacity for M&E and provision of curative and preventive tuberculosis healthcare services, logical framework for M&E and provision of curative and preventive tuberculosis healthcare services, M&E work plan and provision of curative and preventive tuberculosis healthcare services and data dissemination and use and provision of curative and preventive tuberculosis healthcare services. Combined M&E system and provision of curative and preventive tuberculosis healthcare services, stakeholder participation and provision of curative and preventive tuberculosis healthcare services and organizational structure and provision of curative and preventive tuberculosis healthcare services. The chapter also contains theoretical framework which reviewed theories that are relevant to the study and a conceptual framework to show the relationship between the variables. The chapter lastly presents summary of literature and knowledge gaps.

2.2 Provision of Curative and Preventive Tuberculosis Health Care Services in Public Health Institutions

In the 20th century, world health organization (WHO, 2008) championed for the provision of health care services worldwide to the public provided by the public health institutions funded by the government. Health care has been defined differently but the study therefore, referred to it as furnishing of medical, surgical treatment, nursing and complementary health services, preserving mental and physical wellness in offered medical services in alignment to health care professionals (Houghton, 2004). Good health care delivery is significant for the health care system that will ensure effective delivery of health care services. Previous study by (David, 1999), indicated that the populace does not have much trust in the services offered by the public health institutions since they don't guarantee the expected results to the beneficiaries.

WHO (2008), assertion that the globalization has an influence on the world health systems and that the other health providers does not have the capacity to manage the health system and this therefore, leads to the search and mobilization and funding that can be consolidated

to manage the health systems. The provision of health care services requires adequate financial support from the government that is focused on the service provision to its people. Researchers acknowledged that it is appropriate that health care services provided can hugely impact the country's health care systems that can be relied upon health care service provision (Starfield, Shi and Mancinko, (2005). Health care systems therefore, differs from one state to the other however, the health care providers fundamental objectives remains the same despite of the disparities in terms of the levels and operational standards.

The health care system should be comprehensive in its nature that it should be able to deliver varied health care services to the public, more importantly improving of the health care activities that is comprised of prevention, curative, maintenance and sustainability of health care services meets the expectation of the public (WHO, 2008). In the knowledge of (Sen, 1999) medical health care services to the people should be provided with a universal approach and social protection that will bring the confidence to the people on the health provision by the public health institutions. There are main characteristics (Masseira *et al.*, 2009) acknowledges that the primary health care should be focused on people, accessibility and comprehensively.

The accessibility of curative and preventive tuberculosis health care services is significant and should be closer to people without any barrier that might hinder its delivery to the patients. Geographically, health care services have different barriers that hinders access for the less fortunate people especially in remote areas where there is neither near health care service provider nor lack of health care institution (EC, 2008). Therefore, this has resulted to the emergence of diseases that the government find difficult to monitor and to evaluate the distribution of public health providers within the affected locality and to ensure the accessibility of provision of curative and preventive tuberculosis health care services to the patients (Frendall, 1986). The study indicated that the government is mandated to ensure accessibility of health care services to the public at all levels (Mabogunje, 2007). Health care accessibility is significant aspect in considering of the many patients are unable to reach the public health institutions due to poor infrastructure and means of transport.

Public health institutions should be certain to have the capacity to diagnosis tuberculosis and a developed network with specific programs to manage, prevent and to cure the disease. The effectiveness of the specified program for the disease are therefore significant in

ensuring that all encompassed purpose composed of laboratory-based surveillance and present significance outcome of the capacity of health care system to manage the disease. The maximization of the public health institutions limited resources lead to the incapability of the integration effort to ensure that the disease is contained. However, to utilize the limited resources make it necessary to focus on the disease program that strengthen the public health institutions capacity and functionality of the tuberculosis disease.

There has been a global effort on the prevention, curative and containment of tuberculosis disease and to stop the infection from one person to another. This effort can only be done after the diagnosing the affected individuals affected with TB and to provide drugs for treatment (World Health Organization, 2017). The effective prevention of TB disease to infect more people is to administer an effective TB treatment that enable those affected with latent TB to suppress them to progress to active, infectious and tuberculosis infection. The widespread of infections rate of individual's raises caused by ineffective treatment, drug resistant TB that reduces the general mitigation measures of the TB endeavor. The effort however, suffers a blow due to the rampant increase of the TB/HIV infection that leads to the increased rate of infectious persons (World Health Organization, 2017). Consequently it is paramount to note that, the infection trend will definitely contribute to the increase of infection globally of the people developing active TB increasing rather that decreasing.

The TB infection control of infection is effectively handled in specific settings such as hospitals and prisons where the patients are within a certain parameter that provides a conducive environment to prevent the infection from spreading. The pasteurized milk is a preventive measure against bovine TB (World Health Organization, 2016). The TB vaccine contributes to minimum TB prevention especially in adults. The chemoprophylaxis drug is significant in the reduction of the initial active TB among the affected people with latent TB. The TB Bacillus Calmette-Guerin (BCG) vaccine is the most preferred approximated with about 80% of new born babies and infants in the national immunization programme (World Health Organization, 2011). Despite the fact that massive use of the vaccine, the BCG vaccine has been proved to be effective in the prevention of the widespread of all forms of TB. The pulmonary TB is varied in adults and various TB vaccines are at disposal to control the disease with the BCG vaccine usually used to prevent TB in children.

Treatment of tuberculosis is significant since it improves the health of the sick as well as the community due to its nature of infection and spreading rate. The treatment of the TB is provided by all categories of health care facilities that offer the services not only for treatment but also prevention. The treatment of the disease is focused on the adherence to the treatment schedule that involves the follow up to ensure that the patients complied with the treatment to its completion. The U.S. Food and Drug Administration (FDA) in the recent past has approved ten different types of vaccines that can be used to treat tuberculosis with the TB anti-vaccines forming the center of curing vaccines the treatment duration depending on the times of doses ingested over a specific duration of time (FDA, 2018).

There are specific TB vaccines that are widely used and hence there should be availed for use under considered situations such as the HIV/AIDS infection, drug resistance, pregnancy, diabetic, or infant's treatment (FDA, 2018). The tuberculosis bacteria poses a threat to the body due to its multiplying effect that makes it active that make it hard for the body immune system to halt the bacterial growth leading to the TB disease. The tuberculosis once infected in the body make a person sick and at the same time may pose threat to the people whom they spend much time with. Therefore, it is significant to advice on the affected people to seek treatment through to its completion if at all the disease is to be wiped out. The TB disease treatment is advisable to continuously take drugs for the period between 6 to 9 months as advised rather than ceasing or skipping that may make the patient fall sick and also drugs resistant.

The quality of health care is the fundamental concept that contributes to ensure that curative and preventive of tuberculosis health care services delivered satisfy the client's expectation. The health quality can be enhanced through the innovation that contribute to effective curative and preventive of tuberculosis health care services delivered and as well as it's sustainability (Zaltman, Duncan and Holbek, 1973). Health institutions should adhere to continuous processes of operations with the observance of creativity and innovations that enhance quality within the organization focusing on its objectives. However, there has been no greater significance in the improvement of quality health care delivery which borrows majorly on the process of the implementation of the programs to achieve (Repenning and Sterman, 2001).

The health care system should be person centered that ensures that curative and preventive of tuberculosis health care services are efficiently encapsulates the foremost consideration of the patients in devolved health system (UNMD, 2000). The health services are focused around the person rather than financing. The curative and preventive tuberculosis health care services delivery to clients to be responsive and acceptable to the intended population as well as partners in health care. More importantly, the health care coordination of the health care services activities network amongst the participants to ensure safe and effective curative and preventive tuberculosis health care services is given to patients. The patients' health care needs may be achieved with a well incorporated aspect that ensures that there is accountability, efficiency and improvement in their system. The health care services are significant in ensuring that the health systems indicators are projected to enhance performance in respect to the projected targets.

Healthcare system should be designed that the services covers a defined target population that comprises of all the existing individuals, groups and the varied class in the society. The provision for curative and preventive tuberculosis health care services to the clients are in such a way that the continuity is significant for the follow up on the treatment of the tuberculosis. However, the cost for treating tuberculosis is a burden to the majority of the population and that leads to the increase of deaths despite of a possible health cover such, national health insurance fund (NHIF) and various insurance health policy covers made affordable to all that will enable the public to get the health services delivered (Bultman, Kanywanyi, Maarifa and Mtei, 2012). The continuous health care services delivery is significant in assessing of the individuals after the provision of the medication to ensure that progressiveness of the patient is assured and restored to good health. The aspect stressed should be focused on the connection between an individual and health care providers.

2.3 The Concept of Monitoring and Evaluation System

The concept of monitoring and evaluation system components is significant in actualization of effective delivery of health care services. The components are integrated through inputs of health activities that results in ensuring that objectives of providing effective curative and preventive tuberculosis health care services in public health institutions are achieved that meets the intended purpose. Put differently, public health care institutions in embracing monitoring and evaluation system are by large have the improved health care delivery rendered to patients that meets the expectation. Nonetheless, Khan, (1998) indicated that

previous studies of monitoring and evaluation is systemized in the organization to enhance service delivery that meets the set objectives. Therefore, the study investigated the integrated M&E system components on provision of curative and preventive tuberculosis health care services in public health institutions.

Khan (1998) further suggested that lessons learned out of the outcome of monitoring and evaluation are vital in mitigating problems affecting delivery of health care services and the decisions that will improve on the delivery health care service. This is significantly based on the ensuring that monitoring and evaluation system results are based suited to impact the public health care institutions with a mandate of provision of curative and preventive tuberculosis health care services to the patients by making informed decision (Gorgens and Kusek, 2010). However, M&E process and application commands huge resources which resonate the various activities that result in the achieving of the intended objectives of these public health institutions (Edmunds and Marchant, 2008). Kelly *et al*., (2003) that operative monitoring and evaluation system has an impact on provision of curative and preventive tuberculosis health care services that will satisfy the public.

A well-developed monitoring and evaluation system is paramount in enhancing health care programs through the study components that will enhance delivery of curative and preventive tuberculosis health care services. Therefore, in realization of this, the monitoring and evaluation system components are integrated in the health processes those impacts on the focused goal. This further responds to the circumstances that may affect the implementation activities and hence enable effective provision of curative and preventive tuberculosis health medical services that satisfy the affected. The effectiveness on provision of curative and preventive tuberculosis health care was anchored on coordinated monitoring and evaluation system components. World health organization, (2002) developed a framework for health systems that would help in assessing the outcome besides geared towards improving health care services offered.

Effective monitoring and evaluation system requires that, integration of components that would help to achieve the desired purpose of providing effective health services by implementing activities in reference to the public health institutions. Strategic plans, effective operations and implementation activities in reference to the public health institutions objectives. However, with adequate involvement of M&E system components

well integrated in provision of curative and preventive tuberculosis health care services. Shakarishveli, (2009) suggested that effective planning providing an aspect of data collection, analysis and documented plan for M&E system during the implementation in which inputs are transformed into output contribute to the achievement of the intended results.

2.4 Human Capacity for M&E and Provision of Curative and Preventive Tuberculosis Health Care Services in Public Health Institutions

Human capacity for monitoring and evaluation is significant in health care activities, implementation that ensures effectiveness and efficiently in the provision of curative and preventive tuberculosis health care services. Therefore, to succeed achieve this, skilled human resource for monitoring and evaluation is essentially responsible to perform the revered function that ensures utmost performance that meets the set goals. Gorgens and Kusek, (2010) contribution to the human capacity for M&E as the human resources equipped with the skills needed that can be applied in the undertaking of the developing programs of the monitoring and evaluation. Further, the UNAIDS, (2008) consider M&E system framework with skilled human capacity that is appropriate to deliver the expected results.

The fundamental framework of M&E system is vitally characterized by human capacity for M&E that ensure that the sustainability of the programs is achieved. The skilled and adequate human capacity will cope with the dynamics that emerges with the systems. The monitoring and evaluation system activities performed by unskilled, untrained as well as inexperienced human resource function contribute to unproductive, costly, irrelevant and minimal outcome contrary to the expected outcome. This therefore, will not impact the expected impact of the program (Nabris, 2002). However, the UNDP, (2011) assessment of challenges that surrounds the organizational performance and acknowledged that embracing M&E system will automatically improve on the core focus that would be beneficial and to deliver what is expected.

The lack and capability to train the M&E technical staff will lead to organizations to hire and to build up the capacity since there is need to train in implementing monitoring, evaluation activities transforming them to programs (Gosling and Edwards, 2003). The human resources contribute immensely to guarantee delivery of set goals at decentralized

levels through efficiency, equity and performance although the contribution has not been considered (Wang *et al*., 2002). The staff training to gather the information on the program or product or the entity is significant as this will determine the relevancy source of data to draw explicit results concerns the quality and values (Davidson, 2004).

The human capacity are significant to carry out health functions such as inputs despite of the limitation of the international assessment both in terms of monetary and non-monitory resources that remained inadequately distributed than compare with health care expenditure (Anell and Willis, 2000). The human capacity for M&E systems might not work properly if the involved staffs are not skilled with the M&E systems to perform the tasks. Therefore, it is necessary for the public health institutions to ensure that the have a well-trained and skilled staff with me systems that can handle the variety of M&E tools in health care system that leads to the contribution on effective delivery of curative and preventive tuberculosis medical services (Mackay, 2007). The M&E system certain that the intended tasks are completed through the skilled human capacity involved at all level of implementation (Global Fund, 2009).

Diallo *et al,* (2003) conducted a study on human capacity resources for health, an internal perspective that covered Africa, S.E Asia, Western Pacific Europe and Eastern Mediterranean. The study used mixed research design in the three levels focusing on, national, institutional and individual levels based on assessing regulations of health occupancy, training, equipment's and health practitioners. The target population consisted of untrained households on health related and the health work force. The study used questionnaires for data collection. The household based data provided for comparison on the current human health capacity mainly for monitoring human capacity resources for health care provision. Descriptive data analysis was based on primary data source on the number of human health capacity provided by the national reporting system. Regression analysis was employed to provide human resources capacity for health across the multiple countries covered. The study found that by region varied and to equip health capacity and training opportunities occurred by region. Nevertheless, it indicated some discrepancies observed in measuring the study indicators with varied that slightly correlated to the classified occupation.

The comparative status of study was applied using regression technique to triangulate a given human resource capacity indicator unlike this study in which the researcher used the case study, the descriptive design was used with regression technique to triangulate the indicator of human resource capacity for health based on occupation. The study adopted document analysis which explains the status of some phenomenon at a particular time or its development which provided similarity with this study in order to get detailed information. Regression technique was used to triangulate a given HRM indicator calculated across multiple source of different countries was not justified since the different countries offer different training sessions depending on the countries need and hence generalization was not possible Diallo *et al,* (2003).

The study target population and sample size was not revealed and this made it impossible to carry out the scope with such a magnitude scope therefore; the study ought to adopt purposive sampling to address to capture the necessary information from well-informed respondents such in management or core positions. The study ought to have used the case study which examines a social unit as whole giving a detailed understanding of the unit. Then, the conclusion is drawn across the units however, the study conclusion was that despite the nature of complexity of work involved, the study found out that there was need to understand the trends in human capacity for health, limitations with a view to standardizing occupations.

Driessen *et al.,* (2015) study on understanding and valuing the broader health system benefits of national human resource for health information system investment in Uganda. It raises a concern on the capacity of human resource that are constrained that contributed to the study on delivery of health care which is beyond the limit with an individual health professional per 700 people (Campbell *et al.,* 2013). The WHO, (2006) define this state as HRH crisis in countries with deficit should be the ratio is 435 people to one health professional (2.3 per 1000). The study used descriptive survey for the basis of virtually summary of quantitative of data. The human resources capacity for health information system (HRHIS) in Uganda has received a major boost from the US agency to on the implementation of and assures improved health system that would be significance to their health sector. The study target population consisted of eighty-one districts hospitals, fourteen regional health referral facilities and two national hospitals.

The systemic design was used in which human resource for health information system were divided into six different sites were documented. The study used interview schedule and semi-structured questionnaires as instruments of data collection. A sample was drawn from six different sites were employed in the six sites to collect the data on targeted areas thought to have been advantaged as the final consumers of the health care services offered and more so, might have been the beneficence of the aid given. The study found that mode of planning has been fundamental in ensuring that the health care has the capacity strengthened to efficiently manage the two levels of staff consciousness and availability of the qualified health care workforce to achieve the intended results.

The researcher acknowledged the case study used in the study which was significant for the study since different six units had HR which work under the same set up but on different locations and experiences. The study using random sampling technique was not appropriate and the generalization of the results is not possible due to different set up and HR across cannot be a reflection of a representative outcome. The current study indicates the relevancy on the study design used on the empirical study on the essential and strengthening on human resources capacity that can provide effective curative and preventive tuberculosis health care services to clients.

Uwimana, Jackson, Hausler, and Zarowsky, (2012) conducted a study on health system barriers capacity on implementation of collaborative TB and HIV health care activities prevention of mother to child transmission in Cape Town South Africa. The study employed purposive sampling technique to capture in-depth information. The target population consisted of 29 managers of the provincial, District Hospitals and facilities of both public and Non organizations. The study used focus group discussions and transcript. Data was analyzed using thematic analysis in which a total of 33 transcripts were corded adopting persistent comparing the two processes aided by the ATLAS.ti software as suggested by Muhr and Friese, (2004). The analysis was focused on themes in which the transcripts for data collection were fully formed in deferent categories to the respondents.

The results was based on themes generated on the respondent's feedback regarding the implementation process with collaboration of TB/HIV and PMTCT activities and health system barriers that can be mitigated by adherence of policy implementation and integration of health care services. in the year 2008, the study on health at the district report on the

TB/HIV and PMTC indicated that 67% of 2492 the newly admitted patients with TB were counseled and tested on (HTC) and the results indicated that, 74% examined were actual, 41% tested TB-HIV and recommended for preventive measures and 10% on antiretroviral treatment (ART). Among 5878 HIV patients, 69% tests tuberculosis signs reflected with no patient examined and commence on preventive measure using isoniazid preventive therapy (IPT). The number of the expected mothers which were on antenatal clinics (ANC) were 1699, with 33% examined to have been affected by HIV and 54.9% screened to have positively shown the TB symptoms and all the tested patients on IPT (Sisonke – DHIS 2008).

In 2009, the cases examined to have been nationally affected with the symptoms indicating HIV were 3% and were recommended for IPT (UNAIDS, 2010). However, the much expected care had not achieved its purpose as intended and that make it difficult to implement the health care services needed to cure and treat the disease. However, the researcher focused on the public health providing institutions that are funded by the government due to the magnitude of the cases involved as well as the public tax payer's contribution unlike the owned and sponsored private and NGOs health facilities respectively. This study however, adopted descriptive design and regression appropriate for mixed approach and test for hypothesis respectively. However, the study ought to have used comparative case studies which were appropriate to establish the type of health facility that had handled many abortion related maternal mortality cases.

2.5 Logical Framework and Provision of Curative and Preventive Tuberculosis Health Care Services in Public Health Institutions

Logical framework is a tool used for designing, planning and development projects, with clarity, principles and systematic way focuses to the achievement of project objectives (LFA, 1999). It stipulates what the project is intended to achieve anchored on its designed activities. Bakewell and Garbutt, (2005) acknowledges that in some cases, logical framework (LFA) appropriately applied in evaluating of the expected outcome stipulated rather than its intended purpose. Bakewell and Garbutt, (2005) argued that, its flexibility contribute significantly allowing programme cycle and adjustments that mitigate the challenges that might have been experienced. Logical framework eases complexities of the program in terms of the funding and technical parameters depending on the funded organizations. Barton, (1997) asserts that inputs and output indicators are easier to assess in

comparison with neither the effect nor impact indicators. Therefore, logical framework is essential in the planning of health programs (Iglar, 2011) since this will enable health providers to plan properly on a better way to deliver curative and preventive tuberculosis health care services to the public.

Edozien, (2013) conducted a study on radical logical framework for implementation and monitoring healthcare risk management clinical governance in the United Kingdom. The study used a basic conceptual structure approach, change of fundamental cause, presentation of the fundamental assumptions and the quality in which the fundamental assumptions are represented. The study target was focused on fundamental change favorable for achieving the end results product based on the design, surveillance and to account on the prevention, treatment and management of risks of health care. The intention was to make it easy to acquire knowledge at the individual and employers cadre, to intermediate the equilibrium of the organizational operatives and an individual. Edozien, (2013), assures that the areas that influence patient's condition and more so, the pliability to accord the patients interactions in the areas of concern.

The certainty of the patients should be inclusive in its all aspects to achieve the focus. The study found that nature of fundamental structural arrangement stipulate and broadly covering basic conceptual structure approach, change of fundamental cause, presentation of the fundamental assumptions and the quality in which the fundamental assumptions are represented. The enhanced framework design suited acquiring of knowledge and an obligation in organizations and individuals cadre. The framework also enables the safety of patient's sphere. The researcher established that no research design employed in the study but rather adopted framework identified by acronym radical underlying principles and the strength though lacking limitations and mitigation measures was used to collect the information. The study was appropriately suited to use purposive sampling technique to gather the detailed information from the health institutional management on the preparedness on risk management for both the staff and patients (Edozien, 2013).

Mata, Austin, Viner and Douglas, (2015) conducted a study on a development framework intended to mobile health care monitoring in Canada. The focus was on developed logical framework for M&E towards mobile health care that ensure efficient provision health care to the emergency cases. The study used survey research design for evaluating logical

framework in mobile health care monitoring apparatus. The target population consisted of 1266 beneficiaries involved at all the three levels of enhancing, production and assessment that assure users consent and admission of health researchers and doctors to help in imparting the needed knowledge and skills to the residents familiar with health activities. The study sample was 843 respondents were chosen using simple random sampling. The study adopted the use of lightweight application forms required to calculate the data necessary to provide the interior view of health care achievement obtained using mobile for data collection. Data was analyzed using Quick Forms 3.0 application architecture as a tool of analysis.

The study found that, a greater number which did not understand the degree of existence between the beneficiaries and means to accomplish the intended task due to sidelining and partially incorporated to establish with adequate response from a simple attempt demonstration to show the stakeholders. The brain storming sessions addressed the limitations providing for the acceptance of the residence practice profile which was significant to the study focus. The study scope was wider which made not possible for one field visit contrary to this study with defined scope which will make it possible to collect the data precisely. More so, this study has clearly indicated the target population and the group to collect the data with a stratified sampling technique that the conclusion drawn will be assumed to have a representative of the study that will lead to generalization of the findings.

Baku and Azerbaijan, (2011) conducted a study on strengthening of public health capacities and services. A case of all member states in Europe. The study focused on logical framework mechanism for to animate public health capability and practice since it enables the health care practitioners to effectively manage the health activities mitigating the challenges that influence health care delivery services to the clients. Study target population consisted of the regional office public health services expert group with the 17 member states since the year 2007 to draw some aspects some years back that might have impacted logical framework action.

The results indicated that essential public health operations are constantly evolving and need to be frequently that reflects the continuing evaluation, emerging challenges and communication technologies. The member states are obliged to employ the essential public

health operations as a measure to assess infrastructure, achievement and ability to hold relative health activities that will display the existing gap between specified public health challenges of member states and the infrastructure ability necessary to mitigate the problem. Focusing on the essential public health operations evaluation, member states are subjected to develop and to come up with strategies, a planned series of action and suitable programs that would encourage improvement essential delivery of health services across all levels.

The governments at all levels assurance of enough and available resources channeled to health care activities that contribute to deliver effective health services to clients and more importantly identify energy health hazards. The new approaches to health governance employed not able to provide solution of the complex inter play between the various determinants of the health that ensure better performance of the health sector. This study similarly is focused on the effects of logical framework on delivery of effective health care services to public. The researcher hold the view that due to different member state in the study, the case study technique would have been appropriate since each member state contributing varied views that may be useful to develop framework for action that will fit the purpose of mitigating health challenges.

2.6 M&E Work Plan and Provision of Curative and Preventive Tuberculosis Health Care Services in Public Health Institutions

Monitoring and evaluation work plan defined as a fundamental document with detailed description which is integrated with strategic information obtained from the various data collection systems that are used to make decisions that improves programs (Tilbury, 2007). This document ensures accountability in ensuring that the monitoring work plan is focused towards effective provision of curative and preventive tuberculosis health care services to patients. The work plan is focused to ensure that the implementation is done in reference to the monitoring and evaluation. Nonetheless, the work plan flexibility in nature enables for the adjustments that fits in the proposed health care activities that benefit the beneficiaries.

Reynolds and Sutherland, (2015) conducted a study on systematic approach to planning, implementation, monitoring and evaluation of integrated health services in United States. The systematic research design approach was used in the study. The target population consisted of integrated health services, account on health system, managed by program and interventions. The sample was not factored in the study based on its design that involved

systematic approach to help in planning of the programs. The study used logic models as instrument of data collection which requires the general description that provide credibility relating to a sequence of that defines the contributions, part played and accountability, pointer and the origin of data toward the health system.

Data was analyzed using the fundamental assumption of the understanding reality in monitoring and evaluation framework. The study found that, health system improvement and data application ensured informed decision making. This is due to alternatives in M&E function enable it to be more formidable as well as to ensure effective service delivery, action and administrative competence. The study adopted six step systematic approaches of M&E entirely instead of detailed qualitative and quantitative design which has the ability to gather in-depth information significant for realistic decision making in similarity with this study in which the study outlined data collection method and research design. Strong M&E system can provide the information management require in decision making and to present facts that impact health outcome (UNAIDS, 2010).

A study conducted by Kwamie *et al.,* (2014) on advancing application of systems thinking in health, a realist evaluation of Leadership Development Programme for district manager decision-making in a district in Ghana. The study adopted explanatory research design. Target population consisted of leaders undertaking the Leadership Development Programme (LDP) for the purpose of addressing in relation to directed change in administration of the district that used a case study. The study sought to find out the contribution made by the LDP introduction at the district level and its significance in Ghana health system. The Sample was identified as the leadership of the health facilities to undertake the Leadership Development Programme (LDP). The study adopted observation, document analysis and semi-structured interviews for collecting data. Atlas.ti software was used to analyze data.

The study results indicated that LDP is significance and enable the managers to undertake short term outcomes since the application of the novel approach supported teamwork, initiate building and improve ability on prioritization. Study used research exploratory design, data collection on semi structure questionnaire with the document review and observation as well as this study that employs descriptive though the case and the use of questionnaires applicable to both studies. Data was collected using observation and

document review similarly to this study that intends to employ document analysis and in addition the use of questionnaire and interview.

Nash *et al.* (2009) conducted a study on, strategies on efficient monitoring and evaluation system in HIV programme scope in resource limited context: complexities for health systems strengthening in New York. The study used Study used systems used to monitor, the computer program for simplifying data that can be timely entered, assessing of the summary report, the feedback to field and research staff, the entire levels of existence in relating to the indicators of the program, the long follow up of the program development, case traits existing, the geographic knowledge necessary and the utilization of systematic data collected based on mean data for the analysis of epidemiology and operationalization of research. The target population consisted of problems M&E system are subjected to and its application for quick to change the process that accord for greater HIV service delivery to the patients, introduction of the appropriate systems to quantify, asses, investigate and informs health system processes. Sample size was based on preventing basic health care services and chronic disease management.

Data collection instrument used systematic mean data collected for epidemiological analysis and scientific application methods and techniques in decision making. Data was analyzed using epidemiologic analysis techniques in research. The study results indicated HIV is on the rise during early stages hence need to collect data on M&E and apply epidemiological synthesis focused on enhancing program capacity with quick analysis significant to assure the program delivers as expected. The data extracted, HIV survey pointers, population health survey and delivery of healthcare services assesses that informs the gains achieved significantly to meet the set program goals.

In spite of, the study focus on web based system for decentralized information pool, it is contrary to this study that has adopted descriptive survey. The M&E program is potentially fundamental to health system enhancement with the support to make an informed choice in the implementation that increases growth in HIV service provision with limited resources. However, this study is focused on provision curative and preventive tuberculosis health care services to the TB patients in public health institution within a specified region as compared to the previous study in which is generalized.

2.7 Data Dissemination and Use and Provision of Curative and Preventive Tuberculosis Health Care Services in Public Health Institutions

Data dissemination and use is significant in generating and informing planning and decision making that will ensure effective provision of curative and preventive tuberculosis health care services that will satisfy the clients. In public health observation can be termed as the continuous, procedural gathering, decomposition, explanation and dissemination of the information which is significant in reducing morbidity and mortality to improve health care services is significant (Teutsch and Churchill, 2000). Data dissemination in public health facilities are very significant since the dependency for the sound public health care in program planning, monitoring, evaluation and formulating the research hypothesis so that the necessary action can be addressed.

The study conducted by Fazekas *et al*, (2010) on support structure assessment of data use in valuing and improving health services formulation in Europe countries namely; (Germany, Australia, Canada and New Zealand). The study used the case study research design for specific respondents. The target population consisted of 20 planners out of which a sample of 13 respondents was drawn. Purposive research design was adopted. Observation method and focus groups as instruments to collect data which was believed that involved in line of events expected to deliver certain results in planning of the healthcare in the focused relevant countries. The data was analyzed using excel program as a tool of study. The study found that the focus was to develop and validate a fundamental conceptual structure for evaluating that improve and enhance health care planning. The study further found that the data presented based on different countries since the countries are not the same and therefore, holds different aspects of case studies outcome.

The researcher acknowledged the case study design for the study following the nature of the research involving four different countries from which the target population was drawn and the research design enabled the research findings of different countries that would allow comparison hence drawing the conclusion. However, the study focused on both public and private healthcare facilities which was not appropriate given that the nature of the health systems are complicated and different, the slightest extent to analyze the operations and management of healthcare planning in comparison way in which separate the significant parts which cannot stay due to the large number that are associated with the wider administrative internal and external framework for health system, natural environment and

depth that probably have different characteristics across the countries. This study however, was focused on one county with the target population on provision of curative and preventive tuberculosis health care services in public health institutions contrary to study that focused on health care planning and, with this study adopting stratified sampling design. The study focused on the target population that the research believes to have the knowledge required in the study similar to the previous study despite of different research design.

Jegede *et al.*, (2015) conducted a study on evaluating laboratory execution with excellence indicators of transmitted diseases in Kano Hospital, Nigeria. The evaluation of performance of the laboratory data results was to establish the standard of performance that contributes to the expected sustainable improvement. In this study, the evaluation approach as a design was used in the laboratory setting with experimental method to establish the performance through the quality indicators for a period of two years between January and December 2011 and 2013 respectively that combats infections by retroviruses. The excel file was used to enter the raw data before the experiment. The target population was judgmental since the affected patients for HIV were isolated. The data was collected from specified indicators with the view that it would allow for easy entry of laboratory data into computer excel file.

Data was analyzed using variance and student's T-test based on the suitability of its applications and probability of statistical significance of 0.05. The study findings indicted that a sum of 7920 was a computation of the following results, 2194, 2715 and 3011 between 2011, 2012 and 2013 respectively. Despite of the study findings computed, the result rate of (22/7920) 0.28% and a reversal time of (81/7920) were rejected. The outcome rate of 1.02% which was higher and valued of acceptable range during the time of study. The six sigma scale used in analysis, rejected samples amounted to 2778 was faulted at the levels of 4.27, TAT rate of 10,227 and 3.82 sigma per million respectively. The rejected sample was as a result of clots of 50% and the period of time before encountering with TAT caused by the failure of the equipment. Within the same period, the result of PTP for CD4 counted was (67%) and hematology film (79%) was sub-standard sort of the required 80% in comparison to different fields of activity. In the last two years, the outcome of the entire PTP has been sufficient with the consistent record of 100% HIV serology.

The study indicated lack of statistical significance between PTP (CD4 count, hematology, chemistry and HIV serology) in a period of two years 2011 to 2013 ($P > 0.05$). However, CSS indicated positive development of about 59% and 78% in 2012 and 2013 respectively of the general performance which was not up to the mark. Despite of hygiene at the rate of 62% and 86% in the years 2012 and 2013 consequently. The application knowledge on operation at (60% in 2012 and 82% in 2013) and the processes at the rate of 49% and 71% both in 2012 and 2013. Consequently, it was regarded as the most enhanced and expected at 64% and 73% both in 2012 and 2013 to the minimal improvement that there was no statistical significance difference of ($P > 0.05$) in performance experienced. The results showed that the entire SSR 0.28% lower than a 0.57%, 1.46% and 4.19% that were experimented under the same conditions in the laboratory in Porto Alegre, Brazil Guimaraes, *et al.,* (2012). In Delhi, India Agarawal, *et al.,* (2012), respectively. The findings indicated that, the study was scientific that was concerned with experiments in a laboratory settings that the researcher acknowledged that it was appropriate to the study contrary in depicting the descriptive approach of the research phenomena with the aspects of generalization.

A study conducted by Bossyns *et al.,* (2006) on monitoring referral system of data in benchmarking between health centers in a district hospital in rural Niger. The study used a benchmark to interpret to different values in rural and urban health centers in the two regions of the country. The target population consisted of 44 country's hospitals from which a sample of 11 district hospitals benchmarked. The used questionnaire as instrument to collect data with details of daily results in every district for a period between 1995 and 2002. Descriptive statistics was used to analyze data. Results indicated that lower referral cases at the rural health centers lower than 2.5% as compared to the urban health centers. The results indicated that the referral rates were due to inadequate capacity to provide needed healthcare services at either the health center or at district hospital level.

The outcome indicated that out of the total 3, 905, (36%) patients were below 5 years and (49.6%) female patients. The exact rules in particular in adherence to the medical standards yielded 47 emergent situations and 49 low temperature referrals of 2.5% (C.I. ± 0.5 %) of the total 3,905 patients attended. However, out of the 47 patients with emergency cases 85% were suggested for referral with consent and means availed for the transfer and 55% were removed from the district hospital. However, almost the entire removal of emergency cases

which were below 5 years of age was not transferred. Unfortunately, due to the persistent illness, 8 loss their lives few days before the transfer was effected. Despite of the transfer decision made, it was a challenge to fuel the ambulance to facilitate the process (Bossyns *et al.,* 2006).

Based on the referral regulation of therapeutic regulations, it was easier to monitor district accomplishment of the study. Therefore, the knowledgeable on adherence in assessing the development reinforce transfer logistics. The utilization of data by the health institution was not replaced due to location and financial barriers and also evading channels that cause delay. The study focused on the provision of HIV preventive health measures more related to this study being the health care services delivery to curative and preventive tuberculosis which significance to any given population. The study methodology was not clear only the indication of the data that obtained from the records similarly to one of the research instruments adopted in this study. Bossyns *et al.,* (2006), study detailed on the rural and urban health facilities and the referrals of the patients in acknowledgement with this study in which the sub districts that are situated in rural set up refer the patients to the district which are in urban set up for further treatments.

2.8 Monitoring and Evaluation System and Provision of Curative and Preventive Tuberculosis Health Care Services in Public Health Institutions

Monitoring and evaluation system are essentially meant to prescribe an extent and to determine the value of the results drawing conclusions that will be resourceful to the management process and decision making processes (Gorgens and Kusek, 2010). Therefore, the fundamental aspects to comprehend M&E system achievement that are employed majorly hinge on the feedback of M&E exercise since the information was factual and realistic that would enhance progress. The monitoring and evaluation system feedback acts like a framework in which the learned lessons which mitigate the issues affecting the program as well as enhancing the future decision making so to enable the program achieve its intended purpose (Khan, 1998).The monitoring and evaluations systems that are result oriented contributes to the effective and produce effective delivery frequencies of the intended results and the objectives of the program (Edmunds *et al*., 2008).

Shannon *et al.,* (2016) conducted a study on monitoring and evaluating complex health financing interventions in rural Malawi. The study came to the realization of the Malawian population entrenched in HIV and infection of infectious diseases in the recent years in non-communicable diseases has been on the rise (Malawi Demographic and Health Survey 2010). Descriptive research design was used for testing objectives. Target population consisted of 34 control facilities. Random sampling was used to select a sample. Questionnaires and the interview guide were used for data collection. Hybrid approach was used to analyze data. The result indicated that the integration of SSDI-PBI into the monitoring and evaluation of health systems, the patient's notion on the affordability and affectivity of the health care services offered. The study linked this study with the varied of the aspect of the mixed research design, data collection methods on provision of curative \and preventive tuberculosis health care services to the patients. The researcher therefore, concurred with the study methodological approach and the triangulation of the results.

Marshall and Fehringer, (2013) conducted a study on support supervisory in monitoring and evaluation with community-based health staff in tuberculosis HIV AIDS programs: The case of Haiti. The case study was used in the design to evaluate the use of aided supervisory on funded facility on delivery of tuberculosis/HIV AIDS health care. Target population consisted of those who had previously worked with the organization. Data was collected from documents. Judgmental technique was employed. The sample was validated by researchers from the NGOs. The study used semi-structured interview schedules, direct observations and review of relevant documents with the supervisors used the checklists and forms provided for evaluation as instrument of data collection. Descriptive framework was used to analyze data.

The study found that, project met the intended purpose in enhancing program ownership, supervision and improved data quality. The stakeholder planted the collaboration with the government, supervision and feedback and training that led to achieve the objectives. However, the project was not efficient enough to enhance the use of data which was fundamental I decision making. The noted that the stakeholders theoretical aspect which did not yield much results as expected at the health institution. The judgmental sampling was used to identify the relevant respondent that had the required information having participated in the community based program through the lists of the participants in the community based health projects. However, this study adopted stratified design that will

contribute to generalization of the findings. The semi structured schedules for interview and observations methods were used for data collection. The study opted to deliver preventive health care services similar to this study. Data was analyzed using NVivo10 program contrary to regression and correlation of this study.

Herther *et al.,* (1999) conducted a study on complete permissive and discharge services, monitoring and evaluation in Regina district hospital in Canada. The diverse medical staffs were involved in facilitation, evaluation and coordination and access, of the health care services. Monitoring and evaluation system enhance integration resulting in potential integrated fragmented services, improved access, quality, communication, efficiency and effective delivery of health care services with expected outcome. The study used research design to evaluate the impact contributed by the stakeholders. The stakeholder groups were targeted in the study comprised of sensitive community members, different service and the providers and the concerned health staff at district. The study used semi structured questionnaire and group discussions as instruments of data collection focused on varied admission aspects and discharge conducted by medical staff.

Data was analyzed using variance (ANOVA) as a tool of analysis. The study found that focused groups, the questionnaire addressing the intended admission and discharge process of the patients was formed and communicated to the sampled beneficiaries from the relative measure released early in the year 1999. The questionnaire format had two sections, evaluating admission standards. Results indicated that there were significant improvement in admitting and discharging patients within the shortest time possible and as well as clarifying problems incurred in the period within the activities for the program are on course. The results from the focus group survey respondents indicated moderate satisfaction of admission and discharge procedures from the acute care clients with ANOVA results indicating various client groups between the subjects of the study revealed slightly more satisfaction with both admission and discharge. The items analysis results showed 10% higher than the not satisfied in different aspects while 50% and below showed the satisfactory level.

The study found that the focused group results showed regular occurrence significance and providing useful information in admission and a quick way to service and organized. However, several clients unsatisfied generally. The study adopted mixed approach to collect

data. Data analyzed using ANOVA in data analysis contrary to this study which regression and linear analysis. Both studies adopted the use of mixed research design. The study focused on admission and discharge services unlike this study opted to establish the totality on provision of curative and preventive of tuberculosis health care services.

2.9 Stakeholder Participation, M&E System and Provision of Curative and Preventive Tuberculosis Health Care Services in Public Health Institutions

Stakeholder participation is a universal concept familiar with almost all organizations that either implement or make decisions regarding an aspect that may affect beneficiaries in one way or the other directly or indirectly. Therefore, stakeholders defined referred to as the group of people affected by the effects of activities, individuals, groups, community or an institution (Nyandemo and Kongere, 2010). This participation involves issues that affect many people and there is need to focus on them mutually as they may develop to more complex that may affect the outcome of the health care projects as expected with the beneficiaries who might have no knowledge to debate on the problem (Sen, 1999).

Man et al., (2015) conducted a study on stakeholder engagement in early stage product-service system development for healthcare informatics. The study a multiple-case study approach is selected, as building theory from cases has the strength of having a higher probability of generating a novel. Theory that is more likely to be testable and empirically valid. The cases focus on development projects for a new PSS, a new service augmenting an existing product, or a new product that supplements an existing PSS. A conceptual framework developed from a literature review has been revised after 25 pilot interviews involving four cases and 13 stakeholder groups. Selection criteria for theoretically useful cases are then developed. Four iterations, with four cases per iteration, employing semi-structured interviews as the primary data collection method are planned.

The results showed that the framework could guide practitioners to systematically identify stakeholders for the new PSS development process. The study found out that the type of connectivity between an ICT PSS and its operating environment can be separated into that resulting from data interactions and that related to process interactions. The outcome indicated that regardless of the required degree of connectivity between the PSS and its operating environment, there was need to engage hospital's management in the beginning to generate ideas, hospital's end users in the middle as well as at the end of the early stage

to generate concepts, select concepts and test prototypes. Therefore, the study similarity on the need to engage hospital informatics or information technology supports end uses at the initial stage that would mitigate the process of implantation to achieve set objectives.

The study conducted by Naminyingo *et al.,* (2016) on mediating outcome of stakeholder engagement in the relationship between stakeholder participation and sustenance of health projects. The study used survey design for establishing the objectives. The study target population consisted of 86 NGOs from which census sampling theory was used. The study used self-administered structured questionnaire and which was close ended 5-point Likert Scale to collect data. Data was analyzed using SPSS software version. The results showed that the involvement of the stakeholders a vital pointer in sustaining the project. Proven from the Beta score based on its significance as a result of model (Beta = 0.619, $p<0.01$).

The findings also indicated that stakeholder involvement enhance obligation that contribute largely to maintain the project thus there are relationship between the two variables (Beta = 0.464, $p<0.01$) are related. The study also found that the sustenance of the project on stakeholder involvement are related with a vital Beta score of (Beta= 0.569, $p<0.01$). Generally, the application multiple regression models with a significant Beta score of 0.457 though with the introduction of stakeholder commitment, there was a reduction of beta score from 0.619 to 0.457. Both studies adopted the use of self-administered questionnaire with a Likert point 1-5 scale to collect data. The significance of stakeholder involvement as a fundamental element in sustaining of projects. Similarly to this study, the researcher hopes that the stakeholder intervention will significantly influence the M&E system on provision of curative and preventive tuberculosis health care services effectively.

Drobac *et al.,* (2013) conducted a study on complete structure and integrated district health systems adjustments: The population health implementation and training (PHIT) and stakeholder engagement in Rwanda. The study used evaluation research design evaluate access of health care improvement, level of excellence and delivery expected outcomes from which a sample were selected using cluster sampling technique. This was focused on the supplement health care simplicity in terms of standard value strategies that empowers the community health workers to deliver effective services to the patients. The targeted population consisted of stakeholders, health support system in different cadre in entire community health system, health centers health facility management staff at the district

level from which the various activities were assessed using population-level outcomes. Focused assessment and operational research tenets were based on both philosophical approaches aided by the collaborated in country's research ability. The six blocks consists of healthcare service delivery, human resource capability, informed system, medicinal products and technology, administrative and financing. The study used questionnaires with an interview schedule to collect data.

Data was analyzed using regression mode of analysis to assess the effects resulted from PHIT expenditure on provision of child care services expected. Data was collected using over-sampling technique and evaluated focused demographic health survey (DHS) within districts. The study found that banking on the initial break through was attributed by the Rwanda stakeholder's initiative on improving the health care services. This study acknowledges that the stakeholder participation is significance in the implementation of health care activities and might influence provision of curative and preventive of tuberculosis in patients effectively.

Aguilera *et al*., (2014) conducted a study on monitoring and evaluating advancement towards universal health cover in Chile. A case study was employed that established coverage of 80 prioritized health problems that has affected the country. On the intervention, the focus was non-communicable diseases as championed in millennium development goals on health. Data was collected using questionnaires and documentations. However, the organization may have lack the needed logistics to enable them to gather adequate M&E data with the needed information for the study as suggested by (Douglas *et al.,* 2003). Therefore, it is significant to acknowledge that no purposeful panning cannot takes place that ensures effective M&E system is integrated in Chile universal health coverage that informs decision making based on data.

The information provided though was inefficient, the conclusions was that high health insurance which was not proportionate to health services provided. The results found that the most diseases are as a result of non-communicable diseases despite their medical cover are rated to be lower than diseases that are infectious in nature like mother to child, family planning, antenatal care as well as specialized child care when considering effective cover. However, more advanced diseases such as dementias and like genetically and metabolic disorders are revealed to be not adequately covered. The household of about 5% are

approximated to pay the total expenditure for health care services and 1.9% is disadvantaged with 40% threshold, 3.6% at 30% threshold despites of the progressiveness of the cover.

Stoopendaal *et al.,* (2016) conducted a study on the re-conceptualizing policy, formative evaluation of an experiment with system-based healthcare in Dutch. The focus was to create an organization with an operative structure that is responsible for self-restraint. Hollnagel, Braithwaite and Wears, (2013), acknowledged the fact that health care is the most complex organized and are constant changing the health institutions. Monitoring and evaluation providing vital framework for health care system as it ensures improvement in service delivery. The study adopted the qualitative approach of study with the experimental design to establish how the system based regulation (SBR) is incorporated in health care management. The target population consisted of six diverse kind of health institutions comprised of two health institutions, two organizations concerned with an elongated care and two health care institutions which according the Dutch health care inspection (DHI) had an effective standard of management.

The study used qualitative formative evaluation as instrument of data collection which took duration of two years of observation, data collection and feedback. Hansen and Hunskaar (2008) indicated that in formative evaluation, evaluators are either objective or detach themselves from the processes of evaluation though participate in the interview process between the participant, end users and evaluators. The study used formative evaluation is essentially situation of self-correct involvement technique of respondents. Gilad, (2011) acknowledges that formative evaluation is a recommended series of events regulated and officially recognized and monitoring organizational ability to carry out self-evaluation, plan and administration of basic program and interior administration and influence system of the organization (Gilad, 2011). Data was analyzed through auditing the questionnaire as assessment tool before the field visit was significant in improving the tool before the data collection exercise is carried out.

The study found that system based regulation suits the managerial aspect of evaluation despite that it cannot withstand the positive results thus regarded as controversy that delayed the implementation. The study used qualitative approach with the documentation analysis contrary to this study use of mixed approach with descriptive survey and also data analysis by formative evaluation and regression analysis respectively. Both studies despite of

different methodologies employed the focus on organizational structure aspect that is resilient to ensure that the set goals are met.

Saxena *et al.*, (2006) conducted a study on monitoring of mental health systems and services in health scheme developing countries. The focus was to establish the applicability of the mental scheme in poor resourced countries. The study used convenient sample design for comparisons of health indicators. The target population consisted of a group of four public mental health indicators from which a convenient sampling. Both studies had the theme aspect of data use that is significant since the decision making process in development of details leading to enhance the delivery of effective tuberculosis treatment and control measures to the patients. Data was drawn from the documents. Descriptive statistics was used to analyze data. Study found that indicators were insufficient to provide adequate details entitled in an indicator. Therefore, it is wise to sensitize mental health plan that is suitable in a developing countries that benefits the victims. The studies had similar focus with the sole goal on the establishing how data use influences provision of curative and preventive tuberculosis health care services in public health institutions.

Mays *et al.*, (2006) conducted a study on institution and economic determinants of public health system performance on delivery of health care services were done in United States. The study used descriptive design for evaluating the determinants. The target population consisted of administrators of local public health organizations from which employed simple random sampling. The study used self-administered questionnaire and Likert scale as instruments of collecting data. Regression analysis was employed to analyzed data. The study found that accomplishments was diverse to the extent of depending on the magnitude of financial ability and structure of the organization structure of public health system, however, few of the public health institutions have managed to developed a strategy that ensure effective service provision. The study used simple random sampling contrary to stratified sampling though similar data collection instruments and linear regression data analysis approach.

A study conducted by Sumaedi, Yarmen and Bakti, (2014) on health care service quality model a multi-level approach with empirical evidence from a developing country in Jakarta, Indonesia. Descriptive research design was employed in the study. The target population consisted of 321 patients from which a sample of 154 was drawn using convenience

sampling method. Questionnaires were used as instrument of data collection. HSQ model was used to analyze data. Results indicated that a multi-level HSQ approach of triangulation comprised of healthcare service impact delivery, healthcare service occurrence in a particular surrounding. The impact of health care takes three aspects such as, attendance period, medication and expected results. The other aspects include the situation, human health resource and staff ability and tough occurrence. The study adopted the positivism approach with a convenience research design and HSQ model for data analysis contrary to this study that pragmatism paradigm was employed in the study with the stratified sampling and regression analysis to analyze the data. However, the studies focus on provision of curative and preventive of tuberculosis health care service to patients.

Walsem, *et al*, (2015) study on deficiency for healthcare and social support services in patients with Huntington's disease, a cross-sectional population-based in Europe. The study used purposive sampling design technique. The target population consisted of Neurology and Neuro-habilitation departments. The study used interviews as instrument of collecting data. Descriptive statistics and chi-square tests was used to analyzed data in comparing nominal social demographic and diseases characteristics across all stages. Non-parametric k-sample tests and multivariate regression was used to evaluate the themes. The study found that the demand for the unmet necessities for socio-health care and human resource capacity for health were high in the identified stages of the disease.

Further, the study found that the point at which the demands of the needed services have not been achieved in health care and at individual rate were the same. The level of education was significant in suppressing the disease in health system (OR = 0.48) and highly disadvantaged standard of social care and supplement (OR = 1.3). The result revealed that the patients report on the necessity reduced recording (OR = 0.57). The studies are focused to establish the factors that if integrated would improve provision of curative and preventive tuberculosis health care services that will satisfy the public.

2.10 Organizational Structure, M&E System and Provision of Curative and Preventive Tuberculosis Health Care Services in Public Health Institutions

Organizational structure is the framework in which the entire if not all organizational functions are pegged on that help the organization through its management to achieve its objectives as well as its strategy (Robin and DeCenzo, 2005). A study conducted on

environmental sustenance in European public healthcare leadership Chiarini and Vagnoni, (2015). The organizational leadership on sustainable and implementation of health care programs were in question on the in European public health care organizations. The study design was focused on initial concept of the process by European standards committed to sustain the environment widely across health institutions in Europe. The health organizations leadership were the target group. The study data was retrieved from the health reports which were of limited information on sustainability of environment in public health organizations.

The study findings reveal that insignificant process established in procuring of an environmental management and audit scheme and ISO 14001in public health care. Lack of implementation was revealed to be relatively to influence leadership and management commitment. The study reviewed established diverse strategies in European public healthcare organizations had diverse strategies enhancing processes sustaining of environment. The study similarly focused with this study on the focus on organizational structure that leads to organizational success based on data collected from the medical reports to get detailed information.

Aikins *et al*., (2013) studied on evaluation of institutional structure, facilitating supervisory visits in primary health care service delivery in the Upper West Region of Ghana. The study used descriptive research design as the guidelines developed FSV equipment appropriate in various categories of health system namely; Community, Sub-District, District and Regional. The target population composed of nine health facilities covering rural health multidisciplinary training, district health management system, super digital hand tester and community healthcare organizations. The processes of FSV of varied categories of which three CHPS zones were selected randomly. The study used electronic as instrument to extract data during field visits. Microsoft Excel software was used to analyze data.

The results indicated that effective health system covering the region, districts, sub-districts and community levels enables health care services accessible to the population. The study found that there is individual and institutional benefit from FSVs. This study concurs with the four levels of the health care the previous study adopted and similarly this study covers the three levels that focus on the constitutional devolved health care system. The previous study based on comparison of nine districts that make it impossible to generalize the study

unlike this case study on monitoring and evaluation system, organizational structure and provision of curative and preventive tuberculosis health care services in Kisumu county that make it possible for the generalization of the study results.

A study conducted by Swanson *et al*., (2015) on strengthening health capacity and structure in developing countries by enhancing organizational capacities and improving institutions in low income countries. Case study design was adopted. The analysis of the data emphasizes on a short-term goals to achieve its objectives rather than strengthen systems. The study found that world health actors acknowledged significance of supplementing local health facilities in health system strengthening (HSS) operations. The study concurs that in strengthening the health system, there no single approach that suits the diverse health systems that deliver effective health care services expected. There is need for certainty healthcare services therefore, require an organizational structure that is well supported which embrace modern ways that improve the global health care. Both studies focus on healthcare delivery services.

Hansen and Hunskaar, (2008) conducted a study on the developing, implementing, and piloting on a sentinel network for monitoring emergency primary healthcare activity in Norway. The study came about due to lack of justified health operation resulted from a statistical perspective to health care system that would have been reliable and comprehensive data essential for health planning, priorities, decision and policy making for better management of the health care institutions. Descriptive design was used in the study. Random sample of 1567 was drawn from 2334 which was the target population of health care workers. The study used sentinel network as the instrument of data collection. Data analysis was done using computer program.

The study discovered 18 selected municipalities were adequately represents the Norwegian municipalities. The study revealed that sentinel network which had a just privilege of representatives from the Norway districts and municipalities with which the data may be useful to both research and improvement of the health care system. The researcher concur with the study methodological approach used due to the wider scope and the bigger sample, the network sentinel was essential in capturing and analyzing the data within the expected time of the study. However, the studies focus on delivery of health care services designed

to evaluate M&E system, organizational structure and stakeholder participation provision of curative and preventive tuberculosis health care services in public health institutions.

A study conducted by Witter *et al,* (2013) on impacts of finance based on health system reform, planning aspects for monitoring and evaluation in Beijing. The study was formed on the basis of financing increasingly used in varied contexts with the view that performance of health care system can be improved. An exploratory research design to review the literature. The emails were used for data collection. Thirty five experts analyzed data. Most fundamental questions in monitoring and evaluation arises are addressed through a systematic way to monitor outcomes intended in strengthening of health system depending on the processes involved in achieving outputs.

The results indicated that the adaptation of the monitoring and evaluation framework integrated into a health systems that can be appropriate with performance-based financing. The researcher view on the study is based on exploratory design, use of qualitative design and program analysis of data used with a wider scope focusing on low income countries which were not specified in the study. However, given that health care is fundamental that every population in a given time basically depends on it. This study focus on a defined scope, use of mixed approach with stratified sampling technique and use of semi structured questionnaires, interview guide and relevant documents. Regression and linear analysis was used to analyze data.

Mohammed *et al.,* (2014) conducted a study on performance evaluation of health insurance in Kaduna State, Nigeria: health care provider's perspectives. The used cross-sectional technique. The study targeted a population of 460 human resources from which a sample of 57 was drawn using a two-stage sampling technique employing random sampling. Structured questionnaires were used in data collection. Logistic regression model was used to analyze data. Results from both modes of payment of human resources were at (95%) improved than fee that was paid after the service at (62%) respectively. The beneficial packages rate stood strongly at (97%), against surveillance mode executed were delicate recording (37%). The management sphere, each of the two readily transfers system of (80%) and received funds of (93%) expected outcome. A multistage sampling and random sampling contrary to stratified sampling with simple random sampling technique and structured questionnaire were employed to both. Study focus was on the medical cover

among the health facilities contrary to this study that is aimed at delivery of curative and preventive tuberculosis health care services to patients in public health institutions.

Buykx *et al.,* (2012) conducted a study on how do small rural primary health care services sustain themselves in a constantly changing health system environment? The study was based on the competency in sustaining the provision of basic healthcare services despite of environmental changes on the rise in rural Victoria in Australia. The study used descriptive survey design. The health care services are vital despite of the inevitable circumstances, there is an effort by the health providers to ensure that the services are sustained and this forms the basis on the study. The longitudinal design was employed to evaluate Elmore Primary Health Service (EPHS) that lasted for a period of six years on the prospect of the sustainability of the health care.

The target population purposive sampling was drawn from the key stakeholders, community and focus groups. Survey, interviews and audit was used to collect quantitative and quantitative data. Data was analyzed using descriptive statistics. The study results revealed that Elmore Primary Health Service (EPHS) has effectively reacted positively to both internal and external changes. Both studies adopted descriptive design with mixed approach for data collection. Target population was the key stakeholders with the focus on sustainability and delivery of curative and preventive tuberculosis health care services to patients respectively.

Prado and Pena, (2010) conducted a study on contraction and provision of basic health care services, comparing traditional and artificial service models in Honduras. The study was to determine the characteristics among the basic public health care provision models and community based health care in regards to the accessibility, cost, quality, satisfactory and management capacity to make an informed decision. The study adopted non-experimental design. The target population consisted of 25 and a sample of 10 attributes drawn that had the traits from other facilities that was relevant to the study. Structured questionnaires were used for data collection. On-parametric tests of a probit model were employed to analyzed data.

The study found that the two models are different based on value, administrative management and client's satisfaction of artificial services model despite of high cost of drugs. The alternative model is performance based as a result of administration in the process of traditional health ministry units that contributes to enhance standards. The study revealed that due to the increase of the alternative models which would be significant, it is necessary to continuously evaluate and analyze facility performance based on type of management that will provide effective provision of curative and preventive tuberculosis health care services that will satisfy the public. Nevertheless, health facilities had enough medications, adequately equipped and strategically located closer to the referrals as compared to the traditional model.

The probit analysis revealed 17% of patients had high possibility to acquire alternative health care services compared to traditional medicinal. A centrally organized management team with the readily and available information need for the study than health facilities. The alternative models are more viable and provides for health services in the areas that had lacked services where the ministry of health had inadequate ability to provide and sustain the healthcare services. The comparative study was employed to evaluate to distinguish the public and community based on health care and similarly, a case study to evaluate delivery of healthcare health care services in public health institutions.

A study conducted by Ochieng, Musyoka and Nzioki, (2016) on factors influencing provision of quality health care services in the public health sector. A case of Nyahururu district hospital, Kenya. Descriptive research design was employed. The study target population of 180 health workers consisted of doctors, nurses, clinical officers, lab technologists and pharmacists. A sample of 129 was used with stratified random sampling. The study used self-administer questionnaire with a close ended as instrument of data collection in which both primary data. The study adopted statistical package to analyze data. The study found out that for the public health care organizations to enhance human resource capacity that is effective with the ability on provision of quality services to the patients.

The study indicated the urgency for the public health sector to incorporate systems in provision of health care activities that would increase the value on provision of curative and preventive tuberculosis health care services to the public. The studies adopted similar methodological approach namely, descriptive survey, case study, stratified random

sampling and mixed data collection methods. However, the study was contrary and focused on monitoring and evaluation system, stakeholder participation, organizational structure and provision of curative and preventive tuberculosis health care services.

2.11 Theoretical Framework

The world health care systems have embraced the concept of monitoring and evaluation system with an objective of effective provision of curative and preventive tuberculosis health care services that ensures that the patients' are satisfied. This M&E system components integrated into the health system ensures that the institutional objectives of effective provision of curative and preventive tuberculosis health care services to the patients are achieved. Preskil and Boyle, (2008) acknowledged that skilled human capacity for M&E, logical framework, M&E work plan and data dissemination and use are adhered to with accountability and stakeholder participation and organizational structure enhances quality of health care services to the patients.

2.11.1 Health Belief Model Theory

In order to establish how monitoring and evaluation system influence provision of curative and preventive tuberculosis health care services in public health institutions in Kisumu County. The HBM theory was linked with the provision of health care services which was applied as the theory guiding the study. The health model theory, was introduced in the 1950s (Hochbaum, 1958) in the US when their health care systems was not able to establish the infectious diseases that were not easily attended to without the knowledge of the nature of the disease. This theory provides the outline that enables the health care planners with the information that results in the development of the mitigation measures that will address the behavior on non-compliance that will ensure that effective delivery of tuberculosis treatment and mitigation measures services to the patients.

The theory holds that the health care for the population are faced by perceived barriers that affect the provision of curative and preventive tuberculosis healthcare services. The HBM holds that effective provision health care services to the patients are a concept that is perceived about the disease and the action intended to mitigate the rising situation of the disease (Hochbaum, 1958) as well as other factors that contribute to the health behavior. The theory objective was to manifest the causes of medical screening programs services in the US public health care especially for diseases like tuberculosis were not very successful

(Hochbaum, 1958). The HBM theory assumes of the variables that affect health behavior directly and which were not moderated intentions remained (Strobe, 2000).

2.11.2 Collaborative Immersion Model Theory

This theory was developed by (Huffman, Thomas and Lawrenz, 2008), and to explain the linkage between human capacity for M&E on provision of curative and preventive tuberculosis health care services. The theory is focused on the skilled human capacity for M&E that is capable to handle M&E on health care programs as well as experienced to deliver credible results that will contribute to the effective provision of curative and preventive tuberculosis health care services in public health institutions. However, despite of effective application for M&E, there are numerous challenges in the implementation processes that are likely to hinder the program in attaining the set objectives. The theory holds that human capacity skills and ability generated are essential in implementing health care activities achieving set objectives (Vygotsky, 1997). However, in the event of evaluating of the programs involving unskilled and in experienced staff may lead in achieving of program goals that were not intended that results in loss of both time and resources invested in the program.

2.11.3 Theory of Change

The theory links the logical framework of the study to ensures that the intended focus of the program is achieved following the laid down work plan. The theory was found by Weiss, (2000), evolve way back as an evaluation theory and that it supports the framework that systematically linked various program activities through inputs and outputs contributes to achieve intended objectives. It provides for the description of the intended processes that explains the initial stages with the focus on achieving the long term objectives and the relationship existing among the various executed activities that will significantly contribute to the program outcome. The theory application in this study is significant and proposes an elaborated logical framework that enhances the health care activities that focuses on the curative and preventive health care services provision to the public planned.

The theory acknowledged that, the result of the sequences of the application of logical principals enhances a complete covering that exist between the two extremes in a certain attitudes and interest in common articulating to attain an intended long term expected by the group sharing a common understanding and interest (Weiss, 2000). More so, the various

activities that impacts the program in question to the planned channel through which indicates stakeholder's participation reaction and influence during the program implementation. The theory of change indicators involved in the program poses the ability to determine the effectiveness in which the program objectives were achieved.

2.11.4 Planning Theory

This theory of planning was linked to monitoring and evaluation work plan with the view that planning is significance in the implementation of health activities are in accordance to the scheduled plan. This theory was developed by Alexander, 1992; Campbell and Marshall, (2013), provided a basic principle for planners to consider since planning is a norm of practice that practitioners cannot do without in delivering the services that delivers results. It is therefore, regarded as a legitimate aspect and norm due to the greater demand on the work delivery for curative and preventive tuberculosis health care services that meet the expectations. The assured way is to plan based on the intended outcome, how to go about it through the formal process that is accounted to ensure the delivered results is achieved according to the plan.

2.11.5 Communication Theory

In this study, this theory was linked to data dissemination and use since data gathered from a subset population, processed, analyzed and is used in the implementation of curative and preventive tuberculosis health care programs. This theory was developed by Claude Shannon (1948). Data will be disseminated and utilized in implementing of the health care programs that are planned to accomplish the intended specific goal (Durham, 2005). This study therefore, adopted the communication theory in disseminating and use of data based on fact that the information gathered, analyze and interpreted and used for provision of curative and preventive tuberculosis health care services in public health institutions as expected.

The information significance would help the management to comprehend the state at which health care systems adopt, apply and implement the outcome of the study that will ensure that the public health institutions provide effective curative and preventive tuberculosis health care services that satisfy the needs of the public. Data dissemination and use will be significant in communicating the gathered information from the field which was processed to provide evidence of the subject matter as it reflects and used in the implementation of the

findings in mitigate against the intended objectives. Durhan (2005), acknowledges that data dissemination processes information was to guarantee successful attainment of intended objectives without uncertainties.

2.11.6 The Outcomes Theory

The outcomes theory was linked with M&E system of the study and defined as an organized plan that influence and intervene organizations to accomplish changes in the world (Duigan, 2009). The inputs are transformed from one state to another through the project activities that leads to the implementation impacting the organization to achieve its intended objectives. It is based on the view of work plans systems that will establish, procedures, measuring the characteristics that will results in effective tuberculosis treatment and control measures health care services that will satisfy the patients. The outcomes theory was developed by Duigan, (2009) with the starting point of the field program and programs evaluation. The theory is associated with the study objective in ensuring that the effective outcome of the program productivity value is increased thus holding on a definite relating to the plan that will contribute to the intended outcome.

The outcomes theory holds on that the effective provision of curative and preventive tuberculosis health care programs that will have an impact to the needs and expectation of the public. The outcomes theory findings stressed on the impact of evaluation as a significant aspect that will attribute to the achievement of the expected outcome. More so, its application of the programs will enhance performance within the organizations with the sustainable outcomes (Hummerlbrunner, 2009). The outcome systems are so explicit in the sense that it provides a framework in which the organization works in line with the aim to achieve the highest limit of the organizational outcome. The study intended to establish the attribute improvement on delivery of effective health care services where the organizational structure contributes to the efficient application of the monitoring and evaluation systems.

2.11.7 Stakeholder Theory

In this study, this theory links the intervening influence of stakeholder participation on provision of curative and preventive tuberculosis health care services on the improved development of the projects through stakeholder involvement (Friedman et al., 2006). The stakeholder theory concept came to emerge in the mid-1980s by Freeman in his work stakeholder approach which draws from the company by building it from the works of

Mitroff in 60s. The theory guides the study on the stakeholder's participation is inevitable in the processes of delivery effective curative and preventive health care services that will satisfy the public.

This theory is therefore, focused on the effective engagement of stakeholders with the focus to achieve the set objectives Freeman, (2003). The descriptive element is applied in the descriptive and manifest the distinguishing and act of the organizations, that comprising how the organizations are handling, the strategies that are in place that is focused in relevant to the organization's identity. The relationship between the management and the stakeholders is established through the information verification that enables the organizations to achieve their intended objectives.

2.11.8 Organization Structure Theory

This theory links the organizational structure that intervenes M&E system and provision of curative and preventive tuberculosis health care services in public health institutions. This theory links with the study organizational structure and it's significant through a series of academic viewpoints which endeavor to manifest the malpractices of the organizational structure and operating process (Nicholson, 1995). This organizational structure theory relies on development of organizational practices, (Taylor, 1911). This study therefore, intends to examine the organizational structure theory and its relevance to the objective of the study on its moderating influence provision of curative and preventive tuberculosis health care services to the patients.

Organizations are formed on the basis to achieve a certain goals and these vary depending on different types of the organizations. The study is focused on the public health institutions that offer curative and preventive tuberculosis health care services to the patients that contribute majorly in understanding relevancy of organizational structure theory that will moderates the outcome of the intended objectives. However, organizational environment is composed of internal and external environment of which either impacts the organizational operations direct or indirect which influences the outcome. The modern organizational theory focus on the connection between the human and environment that ensures open systems, stress the impact from the surroundings and draws new approaches that enables the organizations to achieve the intended objectives.

2.12 Conceptual Framework

The study was guided by the following conceptual framework shown in figure 1.

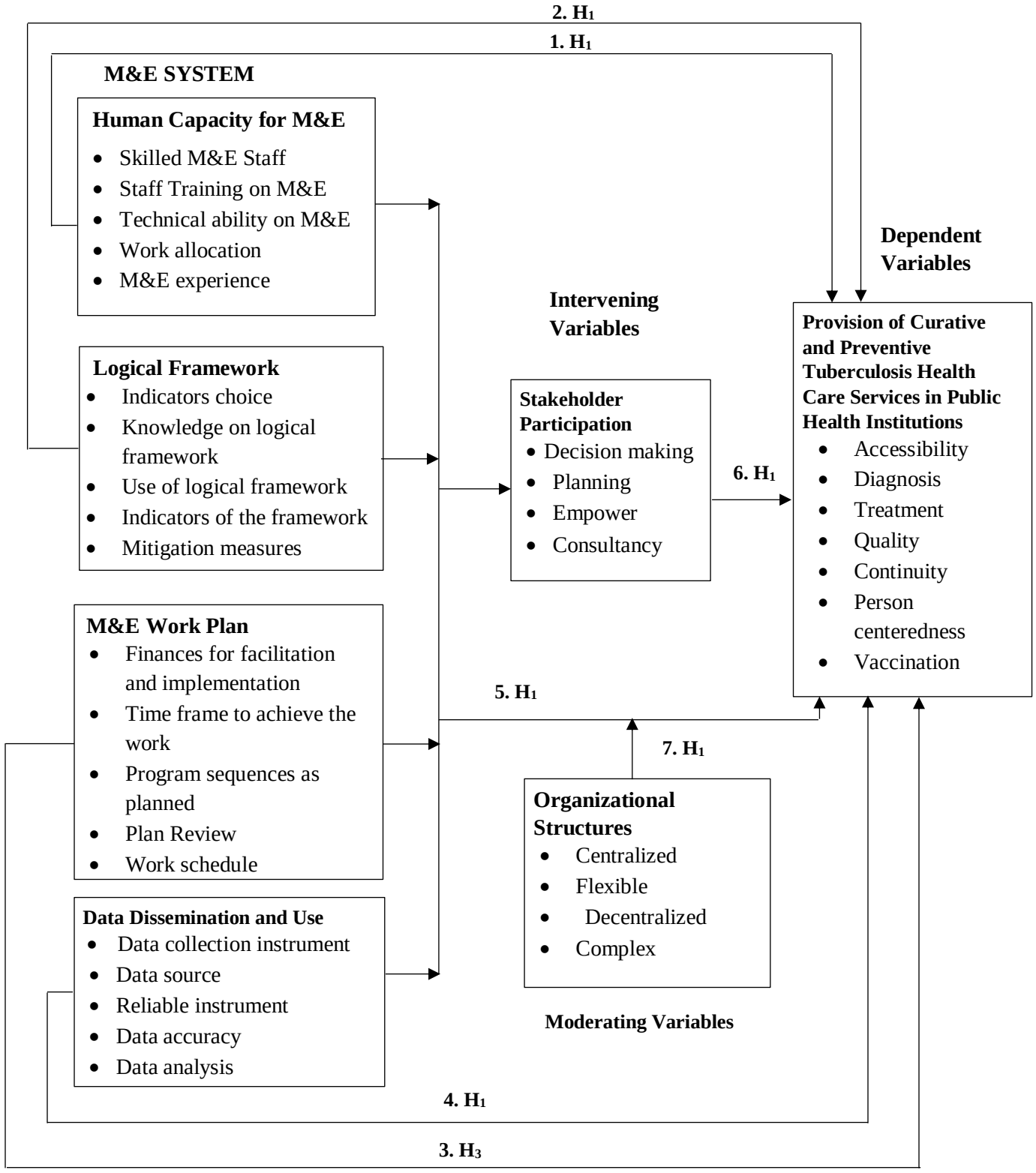

Figure 1: Conceptual Framework showing the relationship between M&E systems, stakeholder participation, organizational structure, and provision of curative and preventive tuberculosis health care services.

Human capacity for monitoring and evaluation is paramount in the implementation process of health care activities in public health institutions that may be destined to achieve efficiency in health care service delivery. The commitment and management support from the public health institution largely contributes to the achievement of effective provision of curative and preventive tuberculosis health care services to the patients. The provision of curative and preventive tuberculosis health care services is anchored on the adequate, skilled and experiences human resource staff to achieve the intended purposes.

Logical framework for monitoring and evaluation is a vital element in formulating, and for the development of health care programs that enable public health institutions to provide effective curative and preventive tuberculosis health care services. The management processes support in implementing of healthcare activities contribute significantly in attaining of the set objectives. In addition, logical framework aid in strengthening project design, evaluation and implementation by setting performance indicators, allocate responsibilities and communicate effectively with a focus to achieve the expected results.

The work plan of health care system are outlined in regards to the availability of resources, the nature of the health activities to be implemented, the distribution of work and the significant inputs that are integrated with a focus of the achieving the viable health programs that will contribute to the provision of curative and preventive tuberculosis health care services that meets expectation. The monitoring and evaluation work plan flexibility provides for mitigation measures that health care activities are performed with an expectation to deliver efficient curative and preventive tuberculosis health care services.

Data dissemination and use are essentially significant for the planning, review and planning of health programs by the health institutions with the view to provide a credible and relevant data for the purpose of providing effective curative and preventive tuberculosis health care services to the people. The data collected will used in the implementation of health care activities as intended that will results in improving the standards and efficient provision of curative and preventive tuberculosis health care services. Monitoring and evaluation, medical data are important in the review of the patient's progress that can be relied upon to the extent of the provided health care services to have met the intended purpose.

2.13 Summary of Literature Review

The literature reviewed from empirical study indicates the concerns of each variable from the study and that the concerns can be as a result of various factors during the study. The provision of curative and preventive tuberculosis health care services in public health institutions is fundamental in ensuring the patients receive good health care services. The accessibility of curative and preventive tuberculosis health care services enable the patients to access the health facilities in order to be diagnosed or to receive the needed health care. The health care providers advise for the mitigation measures regarding the patient's situation as well as ensuring that the measures are adhered to. The health providers ensures that the quality of the treatment of tuberculosis offered restores patients' health with the focus on the disease rather personal centered to attain public health institutions objectives.

Monitoring and evaluation system are significant in developing health care programs since its components guarantee effectiveness in providing curative and preventive health care services to clients. Therefore, in realization of this, the monitoring and evaluation systems components are integrated in the health processes that impact on the focused goal. This further responds to the circumstances that may affect the implementation activities and hence enable effective provision of curative and preventive tuberculosis health care services to the patients.

The human capacity for M&E as a component of monitoring and evaluation systems indicated that the study focused for human capacity for M&E that are professionally developed. The skilled, experienced and adequate human capacity for M&E will significantly impact the health care activities contributing to effective provision of curative and preventive tuberculosis health care services to the clients. Human capacity for health can as well be applied as a tool to create awareness both to political and social stakeholders that are significance in the implementation of handling the human health work force grievances that leads to the achievement of effective provision of curative and preventive tuberculosis health care services to patients.

The logical framework contributes immensely in planning, programming and developing of health care activities and to ensure that the programs developed are within the guidelines that are in consistent to effective provision of curative and preventive tuberculosis health

care services to clients. The framework ensures that the health care activities are significant improved in terms of the health care activities and practices that improved health care delivery.

Monitoring and evaluation work plan contributes immensely in the sense that integrating health care system assures that the processes that are involved in the implementation of those plans are in reference with the initiated work plan. In observing the lay down work plan, ensures that the provision of curative and preventive tuberculosis health care services to the people will meet their expectation. Planning based on the gathered information that will influence the mitigation measures that work towards achieving the health provider objective of effective delivery of curative and preventive tuberculosis health care services to the clients.

The data dissemination and use as an activity of monitoring and evaluation systems that provides the information that will be employed in the implementation of the public health care programs that leads to achievement of institutional set objectives. Measure evaluation (2007) study results revealed that data is constraint by being incomplete and inaccurate thus cannot be relied for decision making. More so, the health providers do not give the adequate training on data therefore the study results indicated the need for staff training that can enable them to analyze, interpret and employ the use of data that will improve the provision of curative and preventive tuberculosis health care services to the beneficiaries.

Effective monitoring and evaluation system significantly impact health care activities that contribute to the effective delivery of the health programs through the input that results that are focused in transforming the health systems. The health care that incorporates the M&E system are destined for the effective provision of curative and preventive tuberculosis health care services that satisfy the needs of the people. Monitoring and evaluation system involved in health care activities in public health institutions will ensure that provision of health care services is effectively delivered.

The stakeholder's participation to the process of the handling the programs is important in capturing the views of the team that may be of great significant input in the development of the health project. The effective use of stakeholders requires that in making decisions that

regards to the project, it is paramount to use the stakeholders with the knowledge of decision making ability that will enhance the provision of curative and preventive tuberculosis health care services that satisfy the public. The stakeholder involvement is generally based on improving of the delivery of curative and preventive tuberculosis health care services in public health institutions that are up to the mark.

The organizational structure of the public health care institution are significant in enhancing the appropriate mechanic structure that impacts the systematic approach of service delivery that leads to the effective provision of curative and preventive tuberculosis health care services as expected services. Therefore, is paramount to embrace the flexible structure that will enhance a greater staff participation enabling high performance and quality that satisfy the needs of the people. The adoption of decentralization structure to facilitate a quick decision making has an important effect on the degree between on the supplier, minimize costs and staff training thus improving on the service delivery.

Table 2.1: Summaries of the Knowledge Gaps Established in the Literature

Variables	Researcher (Year)	Title of the Study	Findings	Knowledge Gap
Human Capacity for M&E	Diallo *et al.,* (2003).	Monitoring and evaluation of human resources for health: An internal perspective.	Many differences observed in the furnishing of human resource on health and imparting skills chances are differed regionally.	Descriptive method used with a regression technique to triangulate a given HRM indicator. Study ought to adopt content analysis. Regression technique did not justified since the different countries offer different training session depending on the countries need and hence generalization was not possible. The study ought to have used the case study.
Human Capacity for M&E	Driessen *et al.,* (2015)	Valuing the health system benefits of Uganda national HR for health information system investment.	The human resource capacity well-coordinated enhances the need that contributes to the knowledgeable of hiring sequence and provision that improve permitted hiring and qualified workforce.	The case study did not capture the HR for health information aspect that can be adopted across the board. The study ought to have adopted random sampling to evaluate the impacts of human capacity for M&E in provision of health care services adopting stratified method of sampling that will provide an objective and comprehensive results.
Human Capacity for M&E	Zarowsky *et al.,*(2012)	Health system barriers to capacity implementation M&E of collaborative TB and HIV activities	Indicated moderate level of implementation and integration supporting the documentation concerning the gap existing based on policy formulation support that enhance implementation.	The target population was heterogeneous, different objectives with purposive sampling employed and focus group for in-depth information. The researcher sort that the case study sampling would be appropriate since the focus was based on three different forms of disease and that leads to comparison of the results since generalization as it were was not appropriate.

Variables	Researcher (Year)	Title of the Study	Findings	Knowledge Gap
		including prevention of mother to child transmission in South Africa	The 2008 report showed that despite of 67% of programs with the 2492 new TB affected granted HIV counselling and testing that resulted to (HCT), 74% positive; 41% of patients TB-HIV induced on cotrimoxazole preventive measure and only 10% on antiretroviral Medicare. Year ending 2009, 45% HIV-positive patients identified with tuberculosis disease, and 3% suffering from HIV induced to IPT (UNAIDS 2010). The increase resulted due to lack of rapid process of working together to achieve results.	The data were collected using transcript rather than a questionnaire with closed and open ended questions which would have covered in depth information vital for the study. The study ought to have focused on the health facilities with human capacity for M&E and have since the set-up of M&E system entirely is anchored on M&E personnel with the skills and capacity to implement it rather than focus on system barriers which can be mitigated with skilled M&E staff.

Variables	Researcher (Year)	Title of the Study	Findings	Knowledge Gap
Logical Framework for M&E	Edozien, (2013)	The radical framework for implementing and monitoring healthcare risk management clinical governance.	The nature radical framework providing a simple though broadly covering the process, to monitor and report on health care effects and measures. The framework deign is suited to enhance learning and accountability at organization and individual levels and safety of patients sphere	No research design employed in the study but rather adopted framework established by radical underlying principles and the strength though lacking limitations and mitigation measures. The study ought to have employed purposive sampling technique which will enable the study to explore the range of different potential impacts.
Logical Framework for M&E	Mata *et al.*, (2015)	A development framework intended to mobile health care monitoring.	A greater misunderstanding between the beneficiaries and the application developer. Adequate response from a simple attempt demonstration to show the stakeholders. The brain storming sessions addressed the limitations significant to the study focus.	Wider scope of the study hence not possible for one field visit. The study ought to have developed a field plan visit to enable the researchers to collect adequate data needed for the study. No demographic was not established either hence not possible to determine the values for each dimension. The study ought to employ multi stage sampling at least selecting a sample in at least two stages due to its efficient and economical.

Variables	Researcher (Year)	Title of the Study	Findings	Knowledge Gap
Logical Framework for M&E	Baku and Azerbaijan (2011).	Strengthening public health capacities and services in Europe. A framework for Action.	Essential public health operations are constantly evolving and need to be frequently that reflects the continuing evaluation, emerging challenges and communication technologies. Operations measure to assess infrastructure achievement	The new approaches to health governance employed not able to provide solution of the complex inter play between the various determinants of the health that ensure better performance of the health sector. The study ought to adopt case study in which each unit is viewed to its reality and then the conclusion can be used to develop framework for action that will fit the purpose of mitigating health challenges.
Monitoring and Evaluation Work Plan	Reynolds and Sutherland (2015)	A systematic approach to planning, implementation, monitoring and evaluation of integrated health services in United States.	Improvement to the health system and the application of data to ensures informed decision making due to the changes in M&E function to make it more integrated in the service delivery, planning and governance competence.	The study adopted six step systematic approaches to the M&E integration instead of the in-depth qualitative and quantitative design which has the ability to gather in-depth information significant for realistic decision making. Strong M&E systems can provide the information for management decision making and produce evidence impact on health outcome. UNAIDS (2010).

Variables	Researcher (Year)	Title of the Study	Findings	Knowledge Gap
Monitoring and Evaluation Work Plan	Kwamie *et al.* (2014).	Advancing the planning of monitoring and evaluation systems thinking in health.	The LDP is significance and enable the managers to undertake short term outcomes since the application of the novel approach supported teamwork, initiate building and improve ability on prioritization.	Study adopted the exploratory case study, data collection on semi structure questionnaire with the document review and observation. The study ought to have as well employ mixed method with a simple random design to establish the unbiased leadership program that would be appropriate to equip the managers with decision making skills.
Monitoring and Evaluation Work Plan	Nash *et al.* (2009)	Strategies on efficient monitoring and evaluation system in HIV programme scope in resource limited context: complexities for health systems strengthening in New York.	HIV on the rise on early stages. M&E data essential in epidemiological analysis and operations research aimed at improving programs. Rapid analysis is significant to ensure that program design and service delivery are evidence informed.	The study perspective did not focus on any particular county or region. Nonetheless, study aimed at the web system founded for decentralized data entry. Therefore, the study did not capture any research design but elaborated on the web based to provide data as the most convenient way to disseminate data to the relevant stakeholders with minimal use of time. The web based system are limited to lack of internet coverage in developing countries and thus the systematic sampling design with the mixed method to capture the real situation across the globe and later adopt the digital platform to transmit the data.

Variables	Researcher (Year)	Title of the Study	Findings	Knowledge Gap
Data Dissemination and use	Fazekas *et al.*, (2010)	Support structure assessment of data use in valuing and improving health services formulation in Europe countries namely; (Germany, Australia, Canada and New Zealand).	The presented outcome is of different countries since they are not the same and therefore, holds different aspects of case studies outcome. The explicit goal setting based on each country and that the scope and varies.	The study employed the case study approach. The study ought to adopt a comparative case study with simple random sampling in the organizational involved in planning. This will ensure that there is a clear indication of the contract services received by the population in one country with those in another Country.
Data Dissemination and use	Jegede *et al.*, (2015)	Evaluating laboratory execution with excellence indicators of transmitted diseases in Kano Hospital, Nigeria.	The study indicators found that the percentage of specimen rejection rate 0.28% reason (Blood clot, hemolysis, insufficient specimen, wrong bottle spill sample). Turn around rate.	Simple random and Structured questionnaires. No research design and ought to have strategic design and a case study for each indicator with a descriptive survey to arrive at a conclusive results since both mixed approached adopted rather than excel file which does not capture qualitative aspect in its results.
Data dissemination and use	Bossyns *et al.*, (2006).	Monitoring referral system of data in benchmarking between health centers in a district	The results showed that (36%) out of 3,905 patients were below 5 years of which (49.6%) were female.	The case study and purposive design would have been appropriate to capture the immediate occurrence to reflect the mitigation measures to undertake rather than only documented data which might not reflect the current situation. The benchmarking is not reliable since the different facilities experience different issues thus cannot be

Variables	Researcher (Year)	Title of the Study	Findings	Knowledge Gap
		hospital in rural Niger	Strict application of the clinical guidelines resulted in 47 emergency evacuations and 49 cold referrals: 2.5% (C.I. ± 0.5 %) of the 3,905 patients seen. No emergency set up for children under 5 years due to lack of finance thus at least 8 died hours later,	generalized. The study borrowed a lot from the records that indicates that no research methodological approach adopted in the study. The research of the study would have been appropriate to investigate the cases and compare the results then drawing a conclusion that comprises of the two studies.
Stakeholder Participation	Man *et al.*, (2015)	Stakeholder engagement in early stage product-service system development for healthcare informatics.	The results showed that the framework could guide practitioners to systematically identify stakeholders for the new PSS development process. The study found out that the type of connectivity between an ICT PSS and its operating environment can be separated into that resulting from data interactions and that related to process interactions.	The study adopted appropriate methodological approach to the study but did not highlight on the scope, continuity, accessibility and accountability aspects of delivering processes that would enhance health care services to the clients. The study however, generalized the findings which was contradicts the research design of the cases of study and hence the study results would have been based on the design of the study.

Variables	Researcher (Year)	Title of the Study	Findings	Knowledge Gap
Stakeholder Participation.	Naminyingo *et al.,* (2016)	Mediating outcome of stakeholder engagement in the relationship between stakeholder participation and sustenance of health projects.	Stakeholder commitment and therefore the two are practically related variables. Stakeholder commitment is a predictor of project sustainability and therefore the two are statistically significant with Beta value.	The multiple regression models was appropriate to adopt in since the study that was to predict the values of the two variable of the study; the stakeholder commitment and stakeholder participation on project sustainability.
Stakeholder Participation.	Drobac *et al.,* (2013)	Complete structure and integrated district health systems adjustments: The population health implementation and training (PHIT) and stakeholder engagement in Rwanda.	Study findings indicates that the structures success were initiated by the Rwanda stakeholder's workforce on HSS that significantly with enormous capacity that resulted in improved health care quality.	This study acknowledges that the stakeholder participation may influence on provision of curative and preventive tuberculosis health care services in public health institutions to the clients effectively. The study was conducted by the WHO standards requirement thus meeting the objective of the study.

Variables	Researcher (Year)	Title of the Study	Findings	Knowledge Gap
Organizational Structure	Chiarini and Vagnoni (2015)	Environmental Sustainable of public healthcare in Europe; could it be just a matter of leadership?	Insignificant processes that attributed to inadequate success in procurement procedure, Eco-management and audit scheme and ISO 14001in public health care. European public health organizations different ways for improving environmental sustainability process.	The study adopted eco- management and audit scheme (EMAS) which is based on precise standard issues by the international organization for standardization. EMA promotes compliance. However, the study would have adopted the case study that would have probe and analyses interactions existing among the factors giving a better understanding of the phenomena since all the countries have different aspects that affect them.
Organizational Structure	Aikins *et al.*, (2013)	Evaluation of institutional structure, facilitating supervisory visits in primary health care service delivery in the Upper West Region of Ghana.	Nine districts embraced FSV idea but disagreed on the basis of concern in the level observed to the adhered to the expected standards. DHMTs and SDHTs bear health care services functions.	This study data was collected using the evaluation method engaging electronic data extraction from the field. FSV eliminate data captured in an in-built Microsoft excel software. The study would have adopted mixed method approach to capture the different aspect of variable in the case study which provides a detailed understanding for each unit since the schools are affected differently.

Variables	Researcher (Year)	Title of the Study	Findings	Knowledge Gap
Organizational Structure	Swanson *et al.*, (2015)	Strengthening health capacity and structure in developing countries by enhancing organizational capacities and improving institutions in low income countries.	The global health player acknowledged the significance of support to local health organizations. No universal approach that can suits all circumstances. The two key outcomes need: Importance of donors and supporting organizations to collaborate to enhance an able administrative to achieve what is expected in the identified countries.	The case study would have been appropriate as each unit face different challenges that a generalized measure cannot be used to mitigate the difficulty.

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

This chapter describes the research methodology used to conduct the study, the sub-thematic areas of methods includes: research paradigm, research design, target population, sample size and sampling procedure, research instruments, validity and reliability of the instruments. It also includes; data collection procedures and data analysis techniques. Ethical issues and operationalization of the variables.

3.2. Research Paradigms

Paradigm may be referred to as the worldviews or belief systems that guide researchers, (Guba and Lincoln, 1994). The study employed the use of pragmatism paradigm which supports the use of mixed methods in research and focuses in what works as a reality concerning the research questions as subject of inquiry, (Tashakkori and Teddlie, 2003). Pragmatic paradigms contain elements of both quantitative and qualitative approaches (Patton, 2002). Pragmatism is a philosophical culture that began in the United States in 1870. The most significance of the principles of pragmatists was (Peirce, 1999, James, 1890). Pragmatic paradigm identifies a group that acknowledge and commands implied for scientists in a systematic method in a specific discipline that affect what should be studied, how research should be done and how results should be interpreted Bryman (2004).

Pragmatic paradigm acknowledges the researcher to interrogate questions which do not comply with both quantitative or quantitative research design and methodology. In relation to this, Darlington and Scott (2002) suggested that, reality decisions are made regardless of whether it takes a quantitative or qualitative research design rather than philosophical loyalty but a trust on a designed and methodology being preferred to the purpose. Pragmatic paradigm focuses particularly research puzzle as the main focus and suggests a comprehensive approach to the problem (Creswell, 2003). The pragmatic approach allows that data collection and analysis dimensions to be used that are most suited to ensure the in-depth assessment of the research problem that no paradigm provides the mitigation of the research problem thus provides for the logical philosophical framework for the pragmatic paradigm approach (Mackenzie and Knipe, 2006). The philosophical paradigm provides the insight on the mitigation of the research approaches that can be suitably for answering the

research questions (Onwuegbuzie and Johnson, 2004). Pragmatic approach provides for the application of different tools such as questionnaire, interview and document analysis in collecting data.

3.2.1 Research Design

The study employed mixed mode of approach with a descriptive survey and correlation research design of the event based on the pragmatic philosophical framework complied with the mixed approaches in research (Mackenzie and Knipe, 2006). The exclusive pragmatic approach therefore, accommodated the varied perspectives through triangulation that ensured the validity of the research involving varied methods of collecting detailed data. It also enhances a better comprehensive approach to the research problem that either of the research problems that were not addressed by a single paradigm. The approaches further, ensured strength that corporate the limitations of both quantitative and qualitative research thus implemented each other.

The descriptive survey design allowed collection of both qualitative and quantitative data that led to capture the necessary information needed to enrich the study. The descriptive survey design descries the present state of a fact, to find out the nature of the event, action, attitudes and to seek accurate descriptions (Kothari, 2009). A descriptive survey design allowed researchers to gather information, summarize, present and interpret for the purpose of clarification. Descriptive research confines multiple variables for analysis contrary to other methods which needs only one variable (Borg and Gall, 1989).

3.3 Target Population

The study units of analysis was four sub county public health institutions which has a functioning monitoring and evaluation system and offer curative and preventive tuberculosis health care services in Kisumu County, Kenya. Based on the information from the Ministry of Health in Kisumu County indicated that the total number of target population would be as follows; medical doctors 87, M&E officers 39, clinical officers 48, nurses 61 and 282 patients. The results are presented in Table 3.1.

Table 3.1: Target Population

Category of Population	KSCH	NSCH	CSCH	ASCH	Totals
Medical doctors	17	15	41	14	87
M&E officers	9	7	14	9	39
Clinical Officers	11	9	18	10	48
Nurses	13	11	23	14	61
Patients	67	27	146	42	282
Totals	**117**	**69**	**242**	**89**	**517**

Source: Kisumu County Department of Health and Promotion of Health Investment 2017

The total target population of the study was made up of 517 health personnel and patients drawn from each unit of analysis of the four public health institutions comprised of medical doctors, M&E officers, clinical officers, nurses and patients, from which a sample was withdrawn.

3.4 Sample Size and Sampling Procedures

This section describes the sample size and sampling procedures that was used to select a sample that participated in the study. These are further explained in the following sub-sequent sub-themes.

3.4.1 Sample Size

The study sample size is extremely important in generating significant results (High, 2000). The sample size of the target population was calculated using (Krejcie and Morgan, 1970), formula as indicated.

$$s = \frac{X^2NP\,(1 - P)}{d^2\,(N - 1) + X^2P\,(1-P)}$$

Where; S = required sample size; $\chi 2$ = the table value for chi-square for 1 degree of freedom at the desired confidence level (3.84); N = the population size (517) P = the population proportion believed to be .50 since this would provide the maximum sample size); d = the degree of accuracy expressed as a proportion (.50).

Therefore;

$$s = \frac{3.84\,(517)\,(0.5)\,(1-0.5)}{0.05^2(517-1) + 3.84(.50)\,(1-.50)}$$

$$= \frac{496.32}{(1.29)+(0.96)}$$

$$= \underline{\underline{221}}$$

3.4.2 Sampling Procedure

Stratified random sampling was employed that guaranteed inclusivity of the study population is represented in the sample that will determine and enhance efficiency (Kothari, 2009; Kotrlik and Higgins, 2001). The study ensured proportional representation from each stratum from the population. The subjects were selected in such a way that the existing subgroups in the population are more or less reproduced in the sample. The population was divided into five groups with criterion used for stratification was categorized as follows, medical doctors, M&E officers, clinical officers, nurses and patients. Simple random sampling was used where numbers were given to every member of the assessable population, placing the numbers separate and then any member of the group were picked at random. Stratified random sampling was employed to ensure inclusion in the sample in each stratum had an equal opportunity to be selected for the study. The sample size of the target population was calculated using (Yamane and Taro, 1967) proportionate method are presented in Table 3.2.

Table 3.2: Sampling Procedure

Category of Population	Total Number	[n = N/1 + N (e)2]	Sample Size
Medical doctors	87		37
M&E officers	39		16
Clinical Officers	48		21
Nurses	61		26
Patients	282		121
Totals	**517**		**221**

Source: Researcher (2018)

3.5 Research Instruments

The study was based on pragmatism paradigm that acknowledge in determining tools to be employed in data collection. The mixed method focuses on achieving utmost quality of the research instruments used in the study and the extent to improve the researcher explanation of data (Onwuegbuzie and Leech, 2006). The questionnaire, document analysis, interview schedule and check list was employed as the main instruments of data collection.

3.5.1 Questionnaire for Public Health Officers and Patients

The questionnaire was the major tool for data collection since it provides for the informed respondents intellectual understanding, attitude and behavior anxiety (Boynton *et al.*, 2004). More importantly it collects in-depth information, easy to administer, analyze and economical (Kothari, 2009). It contains close ended questions and few open ended questions. Section (A) has five questions for collecting information from respondents on personal information such like gender, level of education and years worked in the organization and the category held in order to get information background of the respondents.

In section B, the data on provision of curative and preventive tuberculosis health care services to the patients in the respondent's institution in section C, data was collected on human capacity for M&E, in section D, the data collected on the logical framework for M&E employed in the respondent institution, in section E, the data was based on M&E work plan, in section F, data dissemination and use and its utilization in the institution, in section G, stakeholder participation and in section H, organizational structure in which data was from the respondent institution and section BI, the data was collected from the tuberculosis patients. Each Section has a set of Likert scale of 1-5 type of questionnaire that accords for easier statistical analysis and open ended questions to capture detailed information from the respondents namely; medical doctors, M&E officers, clinical officers and nurses to provide the information based on the themes of the study.

3.5.2 Interview Schedule for Tuberculosis Patients in Public Health Institutions

In spite of the questionnaire, the researcher employed semi structured interview schedule to collect in-depth information from the tuberculosis patients who sought the health care services in public health institutions. It provides for the condition that enables restructuring

of the questions as appropriate (Kothari, 2009). The researcher interviewed the tuberculosis patients based on the variables of the study.

3.5.3 Document Analysis on M&E System

This involves the use of already collected data and analyzed by someone (Kothari, 2009). The study sought to access M&E system materials including, M&E plans and M&E reports that enabled the researcher to establish the M&E impact on provision for curative and preventive tuberculosis health care programs in public health institutions. The information gathered in theses documented reports provided evidence on monitoring and evaluation system components indicators incorporated in provision of curative and preventive tuberculosis health care activities. The check list was also used to collect secondary data.

3.5.4 Pilot Testing of the Instruments

The researcher tested research instruments in Kakamega Sub County hospital which has similar characteristics with the target public health institution in Kisumu County. The respondents were identified using a systematic random sampling technique. The respondent's knowledge and to comprehend the instructions, questions and whether the meaning of the questions are standard among the respondents (Kelly *et al.,* 2003). The study employed 10% of the sample size of 221 for the pilot testing (Mugenda and Mugenda, 2003). Pre-test and retest method was used. In the pre-test, data collected was analyzed and interpreted and the gaps established in the instruments, comments and suggestions were done to develop a refined and final questionnaire. The instruments were again subjected for the re-test to establish if the gaps identified were corrected with the respondents understanding of the questions, the questions were answered correctly and this convinced the researcher that the questionnaires had meet the required threshold of 70% making the instrument reliable to be employed in the study.

3.5.5 Validity of Instruments

Validity ensures that the degree to which results obtained from the analysis of data actually represent the phenomenon under the study (Mugenda and Mugenda, 2003). Mugenda and Mugenda (2003) further argues that estimating the validity from the instrument is not certain without initial data collected using the instrument. To certain validity, the questionnaires were verified by the research supervisors by looking at the items in the questionnaire and

agreed that the test was a valid measure of the concept being measured. The study validity was considered and their dimensions Schmidt, Hogan and Greenfield (2001), and to review the appropriate indicators of the variables and verify consistencies of the questionnaire with the objectives or research questions of the study to confirm content validity.

Criterion-related validity relates to justify facts of a relationship between the attributes in a measurement tool with its performance on some other variable (DeVon, *et al.*, 2007). The study assurance was based on conceptualizing the variables from the literature review and theories from the previous researchers to validate the construct validity. This criterion has the relevance restricted from bias and reliability qualities (Kothari, 2009).

3.5.6 Reliability of Instruments

Reliability can be referred as the extent to which the instruments yield consistent results after repeated trials (Mugenda and Mugenda 2003). Reliability in research is affected by random error as suggested by (Mugenda and Mugenda 2003). The random error is the variation from the correct measurement scheduled to factors that have not been effectively addressed by the researcher. Therefore, Cronbach's Alpha coefficients was used to measure the internal consistency of the instruments. Alpha coefficients range in value from 0 to 1. The higher the value, the more reliable the instrument. The respondent's answers all questions of all items were assessed. The reliability of coefficient of 0.6 was considered to be the reflective of the indicators of the study and therefore, the results was accepted as good measure of reliability. The internal consistency test was carried out and the results are presented in table 3.3.

Table 3.3: Reliability Analysis

Variable	Cronbach's Alpha	Number of Items
Provision of curative and preventive Tuberculosis health care services	0.735	7
Human capacity for M&E	1.000	5
Logical framework for M&E	0.603	5
M & E work plan	0.643	5
Data dissemination and use	1.000	5
Stakeholder participation	1.000	4
Organizational structure	0.724	4

3.6 Data Collection Procedure

The researcher applied for the research permit from National Commission for Science, Technology and Innovation. Recruiting and training of research assistants by the researcher, data was collected using the structured questionnaires, document analysis and interview schedule for tuberculosis patients by the researcher and research assistants. The data was collected in the four public health institution offering curative and preventive tuberculosis health care services that forms the unit of analysis. The research assistants were allocated a specific number of public health institutions to collect data prior arrangement with the management of the public health institutions. The respondents were assured of the confidentiality and academic purposes of the study before collecting the data. The research questionnaires were administered and then collected on agreed date with the respondents. Daily briefings were conducted to ensure high return rate, so that any data not collected was sorted out before analysis began.

3.7 Data Analysis Technique

Data collected was subjected to data analysis involving cleaning, differentiating the description of data. Cleaning data composed of editing, coding and tabulation in order to detect any anomalies in the responses and as well as to assign specific numerical values to

the responses for further analysis. The qualitative data produced in open ended questions in the questionnaire was analyzed by adopting, the thematic framework was used to classify and organize data according to key themes, concepts and emergent categories Ritchie and Lewis, (2003). The data was classified and organized based on the themes and concepts of the study. Regression technique was used to determine the relationship between variables at 0.5 significant level using F-test. The study hypothesis was tested to evaluate M&E system components of human capacity for M&E, logical framework, M&E work plan and data dissemination and use influence on provision of curative and preventive tuberculosis health care services. Data collected and coded and were analyzed using multiple and simple linear regression analysis to establish the relationship between the variables and the application of descriptive statistics such as frequencies and percentages. The analyzed data were presented inform of frequency tables and narrative form.

3.7.1 Correlational Analysis of M&E System and Provision of Curative and Preventive Tuberculosis Health Care Services

The intervening outcome of stakeholder participation on the relationship between M&E system was examined. A variable was acknowledged to function as an intervening variable to the range at which it is considered for the relationship between the independent and dependent variable. The intervening variable part that impacts the influence of an independent variable to the dependent variable and thus signifies to test the influence. The intervening variable was tested based on the regression equations namely; regression of the dependent variable on the independent variable, regression of the intervening variable on the independent variable and regression of the dependent variable on both the independent and intervening variables.

3.7.2 Regression Analysis of M&E System and Provision of Curative and Preventive Tuberculosis Health Care Services

The moderating variable of organizational structure, monitoring and evaluation system and provision of curative and preventive tuberculosis health care services was determined by multiple regression analysis on SPPS. The moderating variable changes the strength of an effect between monitoring and evaluation system and provision of curative and preventive tuberculosis health care services effects.

$$y = a + B_1X \quad (1)$$

$$y = a + B_1X + B_2Z \quad (2)$$

$$y = a + B_1X + B_2Z + B_3XZ \quad (3)$$

3.7.3 Hypothesis Testing

The regression models will be used to test relationship between the independent and dependent variables. With the contribution of monitoring and evaluation system on provision of curative and preventive tuberculosis health care services was determined using the coefficient of determination. F statistics was applied to test hypothesis based on the study sample of 221.

The study hypothesis was tested using linear regression model;

$Y = a + \beta_1 + X_1 + e$ Where;

y = Provision of curative and preventive tuberculosis health care services

a = Constant

β_1 = Beta coefficient

X_1= Composite score for M&E system

e = error term

$$Y_1 = a_1 + \beta_1 + X_1 + e_1$$

$$Y_2 = a_2 + \beta_2X_2 + e_2$$

$$Y_3 = a_3 + \beta_3X_3 + e_3$$

$$Y_4 = a_4 + \beta_4X_4 + e_4$$

$$Y_5 = a_5 + \beta_{51}X_1 + \beta_{52}X_2 + \beta_{53}X_3 + \beta_{54}X_4 + e_1$$

Where; X_1 = Composite score of human capacity for M&E

X_2 = Composite score of Logical framework for M&E

X_3 = Composite score of M&E work plan

X_4 = Composite score of Data Dissemination and Use

Table 3.4 Models for Testing Hypothesis

Objective	Hypothesis	Model	Tool of data Analysis	Results	Remarks
1. To establish how human capacity for monitoring and evaluation influence provision of curative and preventive tuberculosis health care services in public health institutions in Kisumu County.	**1. H_1** human capacity for M&E significantly influence the provision of curative and preventive tuberculosis health care services in public health institutions in Kisumu County**.**	$Y_1 = a_1 + \beta_1 + X_1 + e_1$ y = Provision of preventive and preventive tuberculosis health care a_1 = Constant β_1 = Beta coefficient X_1= Human capacity for M&E e_1 = error term	Simple Linear Regression	R^2=(0.094) F(8.386) P=0.000<0.05	Accept
2. To determine how logical framework influence provision of curative and preventive tuberculosis health care services in public health institutions in Kisumu County.	**2. H_1** Logical framework significantly influence the provision of curative and preventive tuberculosis health care services in public health institutions in Kisumu County**.**	$Y_2 = a_2 + \beta_2 X_2 + e_2$ y = Provision of curative and preventive tuberculosis health care a_2 = Constant β_2= Beta coefficient X_2=Logical framework for M&E systems e_2 = error term	Simple Linear Regression	R^2=(0.011) F(0.892) P=0.000<0.05	Accept

3. To assess how monitoring and evaluation work plan influence provision of curative and preventive tuberculosis health care services in public health institutions in Kisumu County	**3.H_1** Monitoring and evaluation work plan significantly influence the provision of curative and preventive tuberculosis health care services in public health institutions in Kisumu County**.**	$Y_3 = a_3 + \beta_3X_3 + e_3$ y = Provision of curative and preventive tuberculosis health care a_3 = Constant β_3= Beta coefficient X_3=M&E work plan e_3 = error term	Simple Linear Regression	R^2=(0.160) F(15.392) P=0.000<0.05	Accept
4. To determine how data dissemination and use influence provision of curative and preventive tuberculosis health care services in public institutions in Kisumu County.	**4. H_1** Data dissemination and use significantly influence the provision of curative and preventive tuberculosis health care services in public health institutions in Kisumu County**.**	$Y_4 = a_4 + \beta_4X_4 + e_4$ y = Provision of curative and preventive tuberculosis health care a_4 = Constant β_4= Beta coefficient X_4= data dissemination and use e_4 = error term	Simple Linear Regression	R^2=(0.38) F(3.206) P=0.000<0.05	Accept
5. To establish how combined monitoring and	**5. H_1** Combined Monitoring and evaluation	$Y_5 = a_5 + \beta_{51}X_1 + \beta_{52}X_2 + \beta_{53}X_3 + \beta_{54}X_4 + e_5$	Multiple Linear Regression	R^2=(0.183) F(4.360) P=0.000<0.05	Accept

evaluation systems influence provision of curative and preventive tuberculosis health care services in public health institutions in Kisumu County.	systems significantly influence the provision of curative and preventive tuberculosis health care services in public health institutions in Kisumu County.	y = M&E System $B_5 \ldots B_5$= Beta coefficient X_1 = Human Capacity for M&E X_2 = Logical framework X_3 = M&E Work Pla_3 X_4 = Data dissemination and use e_5 = error term			
6. To establish the intervening influence of stakeholder participation on the relationship between monitoring and evaluation systems and provision of curative and preventive tuberculosis health care	**6. H_1** Stakeholder participation significantly intervening influence on the relationship between monitoring and evaluation system and provision of curative and preventive tuberculosis health care services in public health institutions in	$Y_6 = a_6 + \beta_{61} X + \beta_{62} Z + e_6$ Where X = Composite score of M&E system Z = Composite stakeholder participation a_6 = Constant β_{61} and β_{62} Coefficients e_6 = error term	Multiple Regression Analysis	R^2=(0.026) F(0.522) P=0.00<0.05	Accept

	services in public health institutions in Kisumu County.	Kisumu County.				
7.	To determine the moderating influence of organizational structure on the relationship between monitoring and evaluation systems and provision of curative and preventive tuberculosis health care services in public health institutions in Kisumu County.	**7. H_1** Organizational structure significantly moderating influence of monitoring and evaluation system on provision of curative and preventive tuberculosis health care services in public institutions in Kisumu County.	$Y_{7a} = \acute{\alpha}_{7a} + \beta_{71a} X + \beta_{72a} W + e_{7a}$ $Y_{7b} = a_{7b} X + \beta_{71b} X + \beta_{72b} X. e_{7b}$ Where X = Composite score of M&E system W = Composite score of organizational structure e_{7a} and e_{7b} are error terms	Multiple Regression Analysis	R^2=(0.109) F(2.330) P=0.000<0.05	Accept

Source: Researcher (2019)

3.8 Ethical Considerations

The researcher sought permission from the following authorities before undertaking the study. Letters of consent from the county ministry of education, county ministry of health and county commissioner. Research permit from national commission for science, technology and innovation. Respondent's consent was sought before involving them from the sub county health administrative officers from the respective public health institutions. The purpose of the study was explained prior before granted the permission to collect the data. The research guaranteed protection of the subject's identity and privacy by employing the use of codes and not names on the questionnaire. With their consent, the researcher and the research assistants carried out the study while ensuring confidentiality promised in handling the data obtained. The researcher was objective and did not invent the findings to meet researchers or respondents needs. The researcher provided accurate information accounted from the gathered information.

3.9 Operationalization of the Variables

The study objectives, variable, indicators for each variable, measurement scales, research approach, data analysis and tools of analysis as shown in Table 3.5.

Table 3.5: Operationalization of the Variables

Objective	Variable	Indicators	Measurement Scales	Research Approach	Data Analysis Technique	Tools of Data Analysis
To establish how human capacity for monitoring and evaluation influence provision of curative and preventive tuberculosis health care services in public health institutions in Kisumu County.	Human capacity for M&E	-Skilled M&E staff	-Nominal	Qualitative	Non-Parametric	Simple Linear Regression
		-Staff training on M&E	-Ordinal	Quantitative	Parametric	
		-Technical ability on M&E	- Nominal	Quantitative	Parametric	
		-Work allocation on M&E	-Ordinal	Quantitative	Parametric	
		-M&E experience	-Nominal	Qualitative	Non-Parametric	
To determine how logical framework influence provision of curative and preventive tuberculosis health care	Logical framework for M&E	-Indicators choice	-Ordinal	Quantitative	Parametric	Simple Linear Regression
		-Knowledge on log frame	-Nominal	Quantitative	Parametric	

services in public health institutions in Kisumu County.		-Planning on how to employ log frame	-Ordinal	Qualitative	Non-Parametric	
		-Indicators of the logical framework	-Nominal	Qualitative	Non-Parametric	
		-Mitigation measures	-Ordinal	Qualitative	Non-Parametric	
To assess how monitoring and evaluation work plan influence provision of curative and preventive tuberculosis health care services in public health institutions in Kisumu County.		-Finances for facilitation	-Ordinal	Quantitative	Parametric	Simple Linear Regression
		-Time frame to achieve	-Nominal	Qualitative	Non-Parametric	
		-Program of work sequence towards plan	-Ordinal	Quantitative	Parametric	
		-Plan review for the work	-Ordinal	Quantitative	Parametric	
		-Work schedule	-Ordinal	Quantitative	Parametric	
To determine how data dissemination and use influence provision of curative and preventive	Data dissemination and use	-Develop data collection System	-Nominal	Quantitative	Parametric	Simple Linear Regression
		-Data source	-Nominal	Quantitative	Parametric	

tuberculosis health care services in public institutions in Kisumu County.		-Reliable instrument -Data accuracy -Data analysis	-Ordinal -Nominal -Ordinal	Quantitative Qualitative Quantitative	Parametric Non-Parametric Parameter	
To establish how the combined monitoring and evaluation systems influence provision of curative and preventive tuberculosis health care services in public health institutions in Kisumu County.	Combined M&E system					Multiple Linear Regression
To establish the intervening influence of stakeholder participation on the relationship between monitoring and evaluation systems on	Stakeholder participation	-Decision making -Planning -Empowerment	-Nominal -Nominal -Nominal	Qualitative Quantitative Quantitative	Non-Parametric Parametric Parametric	Multiple linear regression Analysis

provision of curative and preventive tuberculosis health care services in public health institutions in Kisumu County.		-Consultancy	-Nominal	Qualitative	Parametric	
To determine the moderating influence of organizational structure on the relationship between monitoring and evaluation systems on provision of curative and preventive tuberculosis health care services in public health institutions in Kisumu County.	Organizational structure	-Centralization -Flexibility -Decentralization -Complexity	-Nominal -Nominal -Ordinal -Nominal	Quantitative Quantitative Quantitative Quantitative	Parametric Non-Parametric Parametric Parametric	Multiple Regression Analysis

Source: Researcher (2019)

CHAPTER FOUR
DATA ANALYSIS, PRESENTATION, INTERPRETATION AND DISCUSSION

4.1 Introduction

This chapter presents the study results and discussions which were analyzed in line with study objectives. The thematic areas include; questionnaire return rate, general information about the respondents, provision of curative and preventive tuberculosis health care services in public health institutions, human capacity for M&E and provision of curative and preventive tuberculosis health care services in public health institutions, logical framework and provision of curative and preventive tuberculosis health care services in public health institutions, M&E work plan and provision of curative and preventive tuberculosis health care services in public health institutions, data dissemination and use and provision of curative and preventive tuberculosis health care services in public health institutions, Stakeholder participation, M&E system and provision of curative and preventive tuberculosis health care services in public health institution, organizational structure, M&E system and provision of curative and preventive tuberculosis health care services in public health institutions.

4.2 Questionnaires Return Rate

In this section, the sample size drawn from the target population was 221 who were issued with questionnaires out of which 187 questionnaires were duly filled correctly and returned for data analysis. The results are presented in Table 4.1

Table 4.1 Questionnaires Return Rate

Responses	**Frequency**	**Percentage**
Responses	187	84.6
Non-responses	34	15.4
Total	**221**	**100**

The questionnaires return rate constitute 84.6% which when compared with of Coopers and Schindler, (2000) recommended for social sciences as 75% and above given that the study obtain the appropriate return data analysis proceeded.

4.3 General Information about Respondents

The study sought to understand the general information about the respondents because it was important to understand the characteristics of the respondents that was participating in the study. This would help in the analysis and interpretation of results. The areas covered under this section include; gender, highest level of education, age of the respondents and job category. The results are presented in Table 4.2.

Table 4.2; General Information about Respondents

Variables	Frequency	Percent	Cumulative Frequency
Gender			
Male	79	42.2	42.2
Female	108	57.8	100
Total	**187**	**100**	
Highest level of education			
Certificate	33	17.6	17.6
Diploma	53	28.3	45.9
Degree	72	38.5	84.4
Masters	26	13.9	98.3
PhD	3	1.6	100
Total	**187**	**100**	
Age bracket			
Below 25 years	20	10.7	10.7
Between 26 – 30 years	43	23	33.7
Between 31 – 35 years	35	18.7	52.4
Between 36 - 40 years	45	24.1	76.5
Between 41 – 45 years	17	9.1	85.6
Between 46 – 50 years	16	8.6	94.2
Above 51 years	11	5.9	100
Total	**187**	**100**	

Table 4.2; General Information about Respondents

Category of respondents	Frequency	Percent	Cumulative frequency
Medical doctors	32	17.1	17.1
M&E officers	13	7.0	24.1
Clinical doctors	17	9.1	33.2
Nurses	21	11.2	44.4
Patients	104	55.6	100
Total	**187**	**100**	

The study results in Table 4.2 indicate that on gender 108 (57.8%) of the respondents were male while 79% (42.2%) of the respondents were female. These findings show that the in public health officers in sub county public health institution, the male are higher and above average than the female. This implies that issue of gender equality still a challenge. However, the 1/3 rule was at least adhered to.

On issues of highest level of education, out of 187 respondents who participated in the study, 3 (1.6%) of the respondents had PhD degree, 26 (13.9%) had Master's degree, 72 (38.5%) had Bachelor's degree, 53 (28.3%) had Diploma and 33 (17.6%) had Certificate level of education. These findings showed that the number of respondents reduces as the level of education increases and hence adequately qualified. This implies that there was adequate academic qualifications that qualify the respondents suitable in their line of duties respectively that contribute to effective provision of curative and preventive tuberculosis health care services to the public.

The age bracket of the respondents below 25 years were 20 (10.7%), between 26 – 30 years 43 (23%), between 31-35 years were 35 (18.7%), between 36 – 40 years were 45 (24.1%), between 41 – 45 years were 17 (9.1%), 46 – 50 years were 16 (8.6) and above 51 years were 11 (5.9)%. These finding indicate that the public health institutions attracted the respondents of diverse age categories hence, cordial interaction leading to mutual understanding improving on provision of curative and preventive tuberculosis health care services.

On various categories sought in the study, 32 (17.1%) of the respondents were Medical Doctors, 13 (7.0%) were M&E officers, 17 (9.1%) were Clinical officers, 21 (11.2%) were Nurses and 104 (55.6%) were patients. These findings indicate that the respondents in the

job category were normally distributed with the highest number of patient respondents seeking the health care services higher as expected. This means that the number of patients under this study seeking the curative and preventive tuberculosis health care services were many compared to the public health officers offering the health care services.

4.4 Basic Statistical Assumptions Tests and Likert Type of Data

This section shows how tests of the regression analysis were carried out. It also includes a description on analysis of Likert type of data. Likert-type or frequency scales use fixed choice response formats and are designed to measure attitudes or opinions (Burns, and Grove, 1997). These ordinal scales measure levels of agreement/disagreement. A Likert-type scale assumes that the strength of experience is linear such as on a continuum from strongly agree to strongly disagree, and makes the assumption that attitudes can be measured. Regression technique was used to determine the relationship between variables at 0.5 significant level using F-test. The reliability of the instrument was tested using pilot testing and the internal consistencies computed using Cronbach's Alpha co-efficient. Based on this technique, a single administration and provides a unique, quantitative estimate of the internal consistency of a scale. The generated of an inter item correlation matrix first and thereafter sum up all the correlation and conclusion drawn from the estimated correlation mean, standard deviation and variance.

4.4.1 Parametric Tests

A parametric test is a hypothesis testing procedure based on the assumption that observed data were distributed in the normal form which the inference of mean were made. The t-test paired or unpaired, parametric were done to test hypotheses on the data obtained from a population, the variances within the groups homogeneity and data was measured at the interval levels. Parametric tests were done differently between two groups and other test were among many groups to establish the direct effect of independent variable on dependent variable, whereas other statistics tested the influence of interactive effects.

One-way analysis of variance and multiple comparisons tests techniques were done to compare two or more groups to determine the differences in the means of the groups are large enough to allow the assumption that the corresponding population means are different. The results indicated a significant difference between the two sample meaning null

hypothesis were rejected. As a test of the null hypothesis, the t value indicated that the null hypothesis was correct. The one-way ANOVA, served the same purpose as the t-test was used to compare sample group means to determine when the null hypothesis was rejected. The computed outcome of a significant F value was capable to establish the difference between the groups compared.

4.4.2 Regression Analysis

Regression analysis was employed to the study which included modelling and analyzing the variables, where there was relationship between provision of curative and preventive tuberculosis health care services and human capacity for M&E, logical framework, M&E work plan and data dissemination and use. Regression analysis was used to test quantitative aspect of the nature of relationships between a dependent variable and independent variables. The results are presented in Table 4.3

Table 4.3; Regression Analysis

Model	Sum of Squares	df	Measures	F	Sig.
Regression	126.032	4	31.508	8.785	0.00
Residual	652.790	183	3.587		
Total	78.822	187			

i. Predators: (Constant), Human capacity for M&E, Logical framework, M&E work plan and Data dissemination and use

ii. Dependent variable: Provision of curative and preventive TB health care services

4.4.3 Correlation Analysis

The Correlation analysis was used to comprehend the nature of relationships between dependent variable and independent variable and their interrelations. The results are presented in Table 4.4

Table 4.4; Correlation Analysis

Model	Coefficients				
	Unstandardized Coefficients		Standardized		
	B	Std error	Coefficients	t	Sig.
(Constant)	34.045	1.542		22.085	0.00
Human capacity	0.086	0.074	0.103	-1.170	0.24
Logical framework	0.316	0.82	0.395	-3.367	0.00
M&E work plan	0.161	0.088	0.176	1.830	0.69
Data dissemination and use	0.066	0.73	0.76	0.076	0.62

i. Dependent Variable: Provision of curative and preventive TB health care services

4.4.4 Multi-Collinearity Test of Independent Variables

Alin (2010), suggested that multi-collinearity exist when at least two independent variables in a statistical model are linearity related in a way that the correlation coefficient R is either greater or less than zero. The variance inflation values required to range between 1-10. However if the Variance Inflation Factor (VIF) were less than 1 or greater than 10, then there was multi-collinearity as presented in Table 4.5

Table 4.5; Multi-Collinearity Test of Independent Variables

Coefficient of Collinearity Statistics	
	VIF
M&E system	
Human capacity for M&E	2.435
Logical framework	2.554
M&E work plan	2.237
Data dissemination and use	2.336

i. Dependent variable: Provision of curative and preventive tuberculosis health care services

ii. VIF = Variance inflation factor

The results indicated that M&E system indicators had a VIF as follows, human capacity for M&E had 2.435, logical framework had 2.554, M&E work plan had 2.237 and data dissemination and use had 2.336. These results implying that variance inflation values were ranging between 1- 10, hence the data was not suffering from multi-collinearity.

4.5 Provision of Curative and Preventive Tuberculosis Health Care Services

Health care services provision is basically essential and it was significant to establish the extent to which provision of curative and preventive tuberculosis health care services in sub county public health institutions are provided in Kisumu County. The study indicators measured were, provision of curative and preventive tuberculosis accessibility of health care services, diagnosis of health care services, treatment of health care services, quality of health care services, continuity of health care services, person centeredness and vaccination of health care services. The respondents were requested to give their opinion on the range of provision of curative and preventive tuberculosis health care services in public health institutions. The items were rated on a five point Likert scale of 1 – 5, where: 1= strongly disagree, 2 = disagree, 3=neutral, 4= agree and 5= strongly agree. The results are presented in Table 4.6.

Table 4.6; Provision of Curative and Preventive Tuberculosis Health Care Services

Statements	**Responses**					**Mean**	**Std. Dev.**	**C.V**
I. Accessibility	**1 f (%)**	**2 f (%)**	**3 f (%)**	**4 f (%)**	**5 f (%)**			**(%)**
a) The TB health care services offered by the institution are directly accessible without a barrier of cost.				146 (78.1)	41 (21.9)	4.22	0.415	10
b) TB patients face economic constraints for the health care services to access the treatment.	18 (9.6)	52 (27.8)		78 (41.7)	39 (20.9)	3.36	1.339	39.8
c) Any referred TB patients has direct access to TB health care services.	50 (26.7)	56 (29.9)		62 (32.2)	19 (11.2)	2.70	1.424	52.7
d) The public awareness on how to access TB health care services at the public health institution.	10 (5.3)	28 (15.0)		101 (54.0)	48 (25.7)	3.80	1.141	30.0

e)	The TB patients are assured to access to the drugs during and after the initial treatment.	1 (0.5)	3 (1.6)	1 (0.5)	129 (69.1)	53 (28.3)	4.23	0.592	13.9
II.	**Diagnosis**								
a)	The TB delay and untimely diagnosis contribute to ineffective treatment for the patients.	51 (27.3)	63 (33.7)		48 (25.7)	25 (13.3)	2.64	1.45	54.9
b)	The TB patients seeking health care services must be diagnosed before treatment.	2 (1.1)	10 (5.3)		106 (56.7)	69 (36.9)	4.23	0.793	18.7
c)	The institution encourages mandatory diagnosis for the referred patients before treatment.		1 (0.5)		103 (55.1)	83 (44.4)	4.43	0.528	11.9
d)	Diagnosed TB patients on treatment are enlightened on the measures to observe during the treatment.	60 (32.1)			2 (1.1)	125 (66.8)	4.31	0.486	11.3
e)	Upon the diagnosis, the patients are immediately put under treatment and surveillance.			3 (1.6)	142 (75.9)	42 (22.5)	4.21	0.445	10.6
III.	**Treatment**								
a)	Tuberculosis treatment is effectively offered in the institution that meets the patient's needs.			2 (1.1)	115 (61.5)	70 (37.4)	4.36	0.504	11.6
b)	The majority of TB patients delay to seek treatment due to limited knowledge of the disease.	19 (10.2)	42 (22.5)	3 (1.6)	83 (44.3)	40 (21.4)	3.44	1.32	38.4
c)	The suspected TB patients are subjected to immediate treatment to avoid the spread of the disease.	7 (3.7)	21 (11.2)	2 (1.1)	102 (54.6)	55 (29.4)	3.95	1.046	24.5
d)	There are positive results recorded in the treatment of the disease.		3 (1.6)	5 (2.7)	124 (66.3)	55 (29.4)	4.24	0.576	13.6
e)	TB treatment is advised to any suspected individual as an effort towards wipe out the disease.	2 (1.1)	2 (1.1)	4 (2.1)	113 (60.4)	66 (35.3)	4.28	0.662	15.5
IV.	**Quality**								
a)	The curative and preventive tuberculosis health care services quality satisfy the patients.	2 (1.1)	1 (0.5)	3 (1.6)	144 (77.0)	37 (19.8)	4.14	0.56	13.5

b) The TB infection is due to lack of proper health care service towards the disease.	37 (19.8)	83 (44.4)	4 (2.1)	46 (24.6)	17 (9.1)	2.59	1.298	50.1
c) In adequacy for curative health care services offered makes the TB persistent.	49 (26.2)	97 (51.9)	6 (3.2)	21 (11.2)	14 (7.5)	2.22	1.173	52.8
d) The TB health care services vary from one institution to another hence influences the patient's choice to seek services.	20 (10.7)	28 (15.0)	5 (2.7)	111 (59.3)	23 (12.3)	3.48	1.202	34.5
V. Continuity								
a) The institution offers after treatment care to check on the progress of the patients.		1 (0.5)	3 (1.6)	153 (81.8)	30 (16.1)	4.13	0.425	10.3
b) The TB patients are put under surveillance while on drugs to ensure compliance.		2 (1.1)	3 (1.6)	138 (73.8)	44 (23.5)	4.20	0.506	12.0
c) There are positive results of TB patient's recovery under observation.			4 (2.1)	117 (62.6)	66 (35.3)	4.33	0.516	11.9
VI. Person Centeredness								
a) The health care services offered to users are perceived to be responsive and acceptable to them.		1 (0.5)	4 (2.1)	117 (62.6)	65 (34.8)	4.32	0.541	12.5
b) The treatment for TB is focused on disease treatment rather than the patient.		7 (3.7)	5 (2.7)	110 (58.8)	65 (34.8)	4.25	0.683	16.0
c) The TB patients are hopeful to get well once on treatment.		3 (6.3)	7 (3.7)	101 (52.0)	76 (38.0)	4.34	0.63	14.5
d) Health care services provided guarantees positive responsiveness that hastens quick recovery.		8 (4.3)	7 (3.7)	126 (67.4)	46 (24.6)	4.12	0.665	16.1
VII. Vaccination								
a) The health care services offers vaccine to those who are perceived to be affected.	39 (20.9)	49 (26.2)	4 (2.1)	60 (32.1)	35 (18.7)	3.02	1.476	48.9
b) The vaccines are provided annually to curb the spread of the disease.	11 (5.9)	20 (10.7)	5 (2.7)	99 (52.9)	52 (27.8)	3.86	1.118	29.0

c) The TB free individual has a high probability not to be affected.	28 (15.0)	80 (42.8)	4 (2.1)	48 (25.7)	27 (14.4)	2.82	1.356	40.0
d) The administering of vaccine has significantly leads decrease of TB patients.	2 (1.1)	6 (3.2)	4 (2.1)	110 (58.8)	65 (34.8)	4.23	0.737	17.4
Composite mean and Std. Dev.						**3.82**	**1.231**	**133**

On accessibility, statement one; The TB health care services offered are directly accessible without a barrier of cost. Out of 187 respondents, 0 (0%) strongly disagree, 0 (0%) disagree, neutral, 0 (0%), 146 (78.1%) agree and 41 (21.9%) strongly agree. The majority of the respondents agreed that the TB health care services offered are directly accessible without a barrier of cost or language. The statement mean score of 4.22 which was above the composite mean of 3.82 with a standard deviation of 1.231 implying that TB health care services offered are directly accessible without a barrier of cost positively influence provision of curative and preventive tuberculosis health care activities in public health institutions. Therefore, more patients are enabled to access medical health care services to regain the condition of health unlike in the situations where there are no accessibility to seek for the health care services.

Statement two; TB patients face economic constraints for the health care services to access the treatment. Out of 187 who responded, 18 (9.6%) strongly disagree, 52 (27.8%) disagree, neutral, 0 (0%), 78 (39%) agree while 39 (20.9%) strongly agree. The majority of the respondents agreed that the TB patients face economic constraints for the health care services to access the treatment on provision of curative and preventive tuberculosis health care activities. However, slightly above average respondents disagreed that. The statement mean score of 3.36 with a standard deviation of 1.339 which was below the composite mean of 3.82 implying that the patients face economic strain in accessing treatment does not influence provision of curative and preventive tuberculosis health care services. That there is need to rationalize the cost that had strained the clients seeking the health care services to affordable rates. However, affordability of health care services allows for more patients to seek treatment reducing hence reducing the spread of the tuberculosis infection and spread among the people.

Statement three; any referred TB patients has direct access to TB health care services. Out of 187 respondents, 50 (26.7%) strongly disagree, 56 (29.9%) disagree, neutral, 0 (0%), while, 62 (32.2%) strongly agree and 19 (10.2) agree. The majority of the respondents 56 (7) agreed. Majority of the respondents disagreed that any referred TB patients has direct access to TB health care services sought direct provision of curative and preventive tuberculosis health care services. However, more than average respondent agreed that any referred TB patients has direct access to TB health care services. The statement mean score of 2.70 which was below the composite mean of 3.82 with a standard deviation of 1.231 implying thatany referred TB patients has direct access to TB health care services does not influence provision of curative and preventive tuberculosis health care services. Therefore, the public health institutions does not provide direct curative and preventive tuberculosis health care services rather, there are strictness in screening the referred patient before administering health care services to the patients. However, the public health care should ensure that the patients that the patients referred from other health facilities are offered direct needed health care services to reduce the delays in initiating treatment to the sick.

Statement four; the public awareness on how to access TB health care services at the public health institution. Out of 187 who respondents, 10 (5.3%) strongly disagree, 28 (15.0%) disagree, neutral were none 0 (0%), while 101 (54.0%) agree and 48 (25.7%) strongly agree. The majority of the respondents agreed that the public awareness on how to access TB health care services at the public health institution. The statement mean score of 3.80 which was below the composite mean of 3.82 with a standard deviation of 1.231 implying that the public awareness on how to access TB health care services at the public health institution moderately influence provision of curative and preventive tuberculosis health care services. Therefore, it is important to ensure that the health providers to come up with the program of creating awareness among the residents that will enable more people to seek treatment hence contribute in eradicating the disease.

Statement five; TB patients are assured to access the drugs during and after the initial treatment. Out of 187 who respondents, 1 (0.5%) strongly disagree, 3 (1.6%) disagree, neutral, 1 (0.5%) while 129 (69.9%) agree and 53 (28.3%) strongly agree. The majority of the respondents agreed that TB patients are assured to access the drugs during and after the initial treatment. The statement mean score of 4.23 which was above the composite mean of

3.82 m with a standard deviation of 1.231 meaning that TB patients are assured to access the drugs during and after the initial treatment influences provision of curative and preventive tuberculosis health care services in public health institutions. Lack of drugs from the health facilities may interfere with fighting the pandemic therefore leading to the spread that may lead to more casualties. On aspect of accessibility of provision of curative and preventive tuberculosis health care services, it was noticed that overall composite aspect of provision of curative and preventive tuberculosis health care services has 17.2% variability on the responses. This showed a fairly good agreement on the responses.

On diagnosis, statement number one; the tuberculosis delay and untimely diagnosis contribute to ineffective treatment of the patients. Out of 187 who respondents, 51 (27.3%) strongly disagree, 63 (33.7%) disagree, neutral were none 0 (0%), 48 (25.7%) agree and 25 (13.47%) strongly agree. The majority of the respondents disagreed that the public awareness on how to access TB health care services at the public health institution with the slight majority agreed that tuberculosis delay and untimely diagnosis contribute to ineffective treatment of the patients. The statement mean score of 2.64 which was below the composite mean of 3.82 with a standard deviation of 1.231 implying that the tuberculosis delay and untimely diagnosis contribute to ineffective treatment of the patients does not influence provision of curative and preventive tuberculosis health care services. Therefore, the public health care providers should devise ways in which the disease could be diagnosed earlier and timely that leads to curb the diseases in its early stages to avoid further infections. The delays in diagnosis leads to more infections making it difficult to prevent and to treat the diseases.

Statement number two; the TB patients seeking health care services must be diagnosed before treatment. Out of 187 who respondents, 2 (1.1%) strongly disagree, 10 (5.3%) disagree, while neutral were 0 (%) 106 (56.7%) agree and 69 (36.9%) strongly agree. The majority of the respondents agreed that the TB patients seeking health care services must be diagnosed before treatment. The statement mean 4.23 which was above the composite mean of 3.63 with a standard deviation of 0.793 meaning that TB patients seeking health care services must be diagnosed before treatment influence provision of curative and preventive tuberculosis health care services. Treating of the patients with the assumptions that they are suffering from the diseases may lead to treating the wrong diseases leading to serious

conditions therefore, it is ethically to diagnose the patients before administering the treatment.

Statement number three; the institution encourages mandatory diagnosis for the referred patients before treatment. Out of 187 who responded, 0 (0%) strongly disagree, 1 (0.5%) disagree, neutral, 0 (0%), 103 (55.1%) agree and 83 (44.4%) strongly agree. The majority of the respondents agreed that the institution encourages mandatory diagnosis for the referred patients before treatment. The statement mean score of 4.43 and standard deviation of 0.528 which was above the composite mean of 3.82 and a standard deviation of 1.231 implying that the institution encourages mandatory diagnosis for the referred patients before treatment influence the provision of curative and preventive tuberculosis health care services. However, treatment without diagnosis may affect the health of the patients due to contrary administering of the treatment for the suspected disease leading to more problems that may cause loss of life. Therefore, mandatory diagnosis is vital since it will help to monitor the trend of the disease infections and mitigation measures to use in dealing with the disease.

Statement number four; diagnosed TB patients on treatment are enlightened on the measures to observe during treatment. Out of 187 who responded, 60 (32.1%) strongly disagree, 0 (0%) disagree, neutral, 0 (0%), 2 (1.1%) agree and 125 (66.8%) strongly agree. The majority of the respondents agreed that the diagnosed TB patients on treatment are enlightened on the measures to observe during treatment. The statement mean score of 4.31 with a standard deviation of 0.486 which was above the composite mean of 3.82 and standard deviation of 1.231 implying that diagnosed TB patients on treatment are enlightened on the measures to observe during treatment influence the provision of curative and preventive tuberculosis health care services. Lack of briefing to the patients may contribute to the disorderly consumption of drugs that may affect the health of the patients negatively.

Statement number five; upon the diagnosis, the patients are immediately put under treatment and surveillance. Out of 187 who responded, 18 (9.6%) strongly disagree, 52 (27.8%) disagree, neutral, 0 (0%), 78 (39%) agree while 39 (20.9%) strongly agree. The majority of the respondents agreed that upon the diagnosis, the patients are immediately put under treatment and surveillance. The statement mean score of 4.21 and standard deviation of 0.445 which was above the composite mean of 3.821 and a standard deviation of 1.231

meaning that, upon the diagnosis, the patients are immediately put under treatment and surveillance had an influence on provision of curative and preventive tuberculosis health care services. Patients that are not monitored may lead non adherence of the measures to follow during the treatment thus not treating of the disease effectively. On the aspect of diagnosis, it was noticed that overall composite aspect of provision of curative and preventive tuberculosis health care services has 9.4% variability on the responses. This showed a good agreement on the responses.

On treatment, statement one; tuberculosis treatment is effectively offered in the institution that meet the patient's needs. Out of 187 who responded, 0 (0%) strongly disagree, 0 (0%) disagree, neutral, 2 (1.1%), 115 (61.5%) agree, 70 (37.4%) strongly agree. The majority of the respondents agreed that the tuberculosis treatment is effectively offered in the institution that meet the patient's needs. The statement mean score of 4.36 and standard deviation of 0.504 which was above the composite mean of 3.82 and a standard deviation of 1.231 implying that tuberculosis treatment was effectively offered in the institution that meet the patient's needs influence the provision of curative and preventive tuberculosis health care services. Lack of drugs in the health facilities may contribute to ineffective fight against the disease hence further spread of the disease.

Statement two; the majority of TB patients delay to seek treatment due to limited knowledge of the disease. Out of 187 who responded, 19 (10.2%) strongly disagree, 42 (22.5%) disagree, neutral, 3 (1.6%), 83 (44.4%) agree and 40 (21.4%) strongly agree. Most of the respondents agreed that the majority of TB patients delay to seek treatment due to limited knowledge of the disease. However, with below average respondents disagreed that the majority of TB patients delay to seek treatment due to limited knowledge of the disease. The statement mean score of 3.44 with a standard deviation of 1.32 was below the composite mean of 3.82 and standard deviation of 1.231 meaning that the majority of TB patients delay to seek treatment due to limited knowledge of the disease does not influence the provision of curative and preventive tuberculosis health care services positively. However, those suffering from the disease have the knowledge of the disease and seek medical care to supress the disease. More importantly, there is need towards identifying the victims of the disease to enable the treatment of diseases to at its initial stages thus curbing the spread of the disease.

Statement three; the suspected tuberculosis patients are subjected to immediate treatment to avoid the spread of the disease. Out of 187 who respondents, 7 (3.7%) strongly disagree, 21 (11.2%) disagree, neutral 2 (1.1%), 102 (54.5%) agree and 55 (29.4%) strongly agree. The majority of the respondents agreed that the suspected tuberculosis patients are subjected to immediate treatment to avoid the spread of the disease was in place. The statement mean score of 3.95 with a standard deviation of 1.046 which was above the composite mean of 3.82 with a standard deviation of 1.231 implying that the suspected tuberculosis patients are subjected to immediate treatment to avoid the spread of the disease influence provision of curative and preventive tuberculosis health care services. The delays in treatment may cause more harm to the health of the patients and also lead to the spread of the disease.

Statement four; there was a positive results recorded in the treatment of the disease. Out of 187 who respondents, 0 (0%) strongly disagree, 3 (1.6%) disagree, neutral 5 (2.7%), 124 (66.3%) agree and 55 (29.4%) strongly agree. Most of the respondents acknowledged that there was positive results recorded in the treatment of the disease. The statement mean score of 4.24 with a standard deviation of 0.576 which was above the composite mean of 3.82 and a standard deviation of 1.231 implying that there was a positive results recorded in the treatment of the disease thus influence provision of curative and preventive tuberculosis health care services. This will significantly lead to lowering of the spread of the disease unlike the situations where there are low efforts in the treatment of the disease.

Statement five; tuberculosis treatment is advised to any suspected individual as an effort towards wipe out the disease. Out of 187 who respondents, 2 (1.1%) strongly disagree, 2 (1.1%) disagree, neutral were 4 (2.1%), 113 (60.4%) agree and 66 (35.3%) strongly agree. These results indicated that the majority of the respondents agreed that tuberculosis treatment is advised to any suspected individual as an effort towards wipe out the disease. The statement mean score of 4.28 and standard deviation of 0.662 which was above the composite mean of 3.82 and a standard deviation of 1.231 implying that tuberculosis treatment was advised to any suspected individual as an effort towards wipe out the disease influence provision of curative and preventive tuberculosis health care services. However, the swollen number of the tuberculosis patients may have resulted delays in administering of the treatment to the affected patients. The coefficient of variance of 52.7%, 52.8% and 54.9% of the line items indicate too large variability that implies there were no agreed

responses. On treatment, it was noticed that, the overall composite aspect of provision of curative and preventive tuberculosis health care services was 11.3% variability on the responses. This showed a fairly good agreement on the responses.

Statement number one; the curative and preventive tuberculosis health care services qualities satisfy the patients. Out of 187 who respondents, 2 (1.1%) strongly disagree, 1 (0.5%) disagree, neutral 3 (1.6%), 144 (77.0%) agree and 37 (19.8%) strongly agree. The majority of the respondents concurred that the curative and preventive tuberculosis health care services qualities satisfy the patients. The statement mean score of 4.14 and standard deviation of 0.56 which was above the composite mean of 3.82 and a standard deviation of 1.231 meaning that the curative and preventive tuberculosis health care services qualities satisfy the patients influence provision of curative and preventive tuberculosis health care services. Poor and substandard provision may lower the quality of health care services being provided to the patients that does not satisfy their needs.

Statement number two; the TB infection is due to lack of proper health care service towards the disease. Out of 187 who respondents, 37 (19.8%) strongly disagree, 83 (44.4%) disagree, neutral 4 (2.1%), 46 (24.6%) agree and 17 (9.1%) strongly agree. The majority of the respondents disagreed that the TB infection is due to lack of proper health care service towards the disease. The statement mean score of 2.59 with a standard deviation of 1.298 which was below the composite mean of 3.82 with standard deviation 1.231 implying that the TB infection is due to lack of proper health care service towards the disease does not influence provision of curative and preventive tuberculosis health care services. Therefore, there is need for the sensitization of the tuberculosis disease so that the public could be able to immediately report the infection to the health facilities to be treated and to curb the diseases in its early stages to avoid further infections. However, lack of sensitization may contribute to more infections thus making it hard to fight the disease.

Statement number three; in adequacy for curative health care services offered make the tuberculosis persistent. Out of 187 who respondents, 49 (26.2%) strongly disagree, 97 (51.9%) disagree, neutral 6 (3.2%), 21 (11.2%) agree and 14 (7.5%) strongly agree. The majority of the respondents disagreed that in adequacy for curative health care services offered make the tuberculosis persistent. The statement mean score of 2.22 with a standard

deviation of 1.173 which was below the composite mean of 3.82 and standard deviation implying that in adequacy for curative health care services offered make the tuberculosis persistent does not influence provision of curative and preventive tuberculosis health care services. Therefore, the public health institutions are in a position to provide curative and preventive tuberculosis health care services that meet the needs of the clients thus, achieving its objectives.

Statement number four; the TB health care services vary from one institution to another hence influences the patient's choice to seek services. Out of 187 who respondents, 20 (10.7%) strongly disagree, 28 (15.0%) disagree, neutral 5 (2.7%), 111 (59.4%) agree and 23 (12.3%) strongly agree. Most of the respondents acknowledged that TB health care services vary from one institution to another hence influences the patient's choice to seek services. The statement mean score of 3.48 with a standard deviation of 1.202 which was below the composite mean of 3.82 implying that TB health care services vary from one institution to another hence influences the patient's choice to seek services does not influence the provision of curative and preventive tuberculosis health care services. This therefore enables the clients to seek the services in any of the public health care that offers the curative and preventive tuberculosis healthcare services. On the aspect of quality, it was noticed that overall composite aspect of provision of curative and preventive tuberculosis health care services has 20.9% variability on the responses. This showed that there was a little bit diverse opinion on the responses.

On continuity, statement one; the institution offers after treatment care to check on the progress of the patients. Out of 187 who respondents, 0 (0%) strongly disagree, 1 (0.5%) disagree, neutral 3 (1.6%), 153 (81.8%) agree and 30 (16.1%) strongly agree. Most of the respondents agreed that the the institution offers after treatment care to check on the progress of the patients. The statement mean score of 4.13 with a standard deviation of 0.425 which was above the composite mean of 3.82 with a standard deviation of 1.231 implying that the institution offers care after treatment to check on the progress of the patients. Lack of this care may contribute to the patient's ignorance to abide with the health guidelines thus rendering the treatment offered ineffective that may lead to more infections.

Statement two; the tuberculosis patients are put under surveillance while on drugs to ensure compliance. Out of 187 who respondents, 0 (0%) strongly disagree, 2 (1.1%) disagree, neutral 3 (1.6%), 138 (73.8%) agree and 44 (23.5%) strongly agree. The majority of the respondents disagreed that the tuberculosis patients are put under surveillance while on drugs to ensure compliance. The statement mean score of 4.20 with a standard deviation of 0.506 which was above the composite mean of 3.82 and standard deviation of 1.231 implying that the tuberculosis patients are put under surveillance while on drugs to ensure compliance influence provision of curative and preventive tuberculosis health care services. This therefore enable the patients to adhere to directives given by the health practitioners that contribute to their recovery thus curbing further infections of the disease. Lack or no surveillance of the patients make it impossible to know the progress of the patients and that might make hard to treat the disease effectively.

Statement three; there are positive results of TB patient's recovery under observation. Out of 187 who respondents, 0 (0%) strongly disagree, 0 (0%) disagree, neutral 4 (2.1%), 117 (62.6%) agree and 66 (35.3%) strongly agree. Most of the respondent's agreed that there are positive results of TB patient's recovery under observation. The statement mean score of 4.33 with the standard deviation of 0.516 was above the composite mean of 3.82 with standard deviation of 1.231 meaning that there are positive results of TB patient's recovery under observation influence provision of curative and preventive tuberculosis health care services. The tuberculosis patients that are not placed under the observation may otherwise not progress well as expected and therefore render the efforts of achieving the expected results. On the aspect of continuity, it was noticed that overall composite aspect of provision of curative and preventive tuberculosis health care services has 7.8% variability on the responses. This showed a fairly good agreement on the responses.

On the person centeredness, statement number one; the health care services offered to users are perceived to be responsive and acceptable to them. Out of 187 who respondents, 0 (0%) strongly disagree, 1 (0.5%) disagree, neutral 4 (2.1%), 117 (62.6%) agree and 65 (34.8%) strongly agree. The results indicate that the majority of the respondents agreed that the health care services offered to users are perceived to be responsive and acceptable to them. The statement mean score of 4.32 with a standard deviation of 0.541 which was above the composite mean of 3.82 with standard deviation of 1.231 meaning that the health care

services offered to users are perceived to be responsive and acceptable to them influence provision of curative and preventive tuberculosis health care services. The unresponsive health care may not achieve the intended results in fighting the disease that may make it hard to deal with.

Statement number two; the treatment for TB is focused on the disease rather than the patient. Out of 187 who respondents, 0 (0%) strongly disagree, 7 (3.7%) disagree, neutral 5 (2.7%), 110 (58.8%) agree and 65 (34.8%) strongly agree. The majority of the respondents acknowledged that the treatment for TB is focused on the disease rather than the patient. The statement mean 4.25 with a standard deviation of 0.683 which was above the composite mean of 3.82 with standard deviation of 1.231 meaning that the treatment for TB is focused on the disease rather than the patient influence provision of curative and preventive tuberculosis health care services. This implies that treatment directed to the patients rather than the disease may make it hard to effective provision of needed health care services due to personal interactions and attitude to the patient hence the disease remain a threat to the life of the patient.

Statement number three; the TB patients are hopeful to get well once on treatment. Out of 187 who respondents, 0 (0%) strongly disagree, 3 (6.3%) disagree, neutral 7 (3.7%), 101 (54.0%) agree and 76 (40.6%) strongly agree. Most of the respondents agreed that the TB patients are hopeful to get well once on treatment. The statement mean score of 4.34 with a standard deviation of 0.63 which was above the composite mean of 3.82 with standard deviation of 1.231 implying that the TB patients are hopeful to get well once on treatment influence provision of curative and preventive tuberculosis health care services. This confirms of the confident that results on effective delivery of the needed health care contrary to situations where minimal or no improvement of the patients health while on treatment.

Statement number four; health care services provided guarantees positive responsiveness that hastens quick recovery. Out of 187 who respondents, 0 (0%) strongly disagree, 8 (4.3%) disagree, neutral 7 (3.7%), 126 (67.4%) agree and 46 (24.6%) strongly agree. The majority of the respondents agreed that the health care services provided guarantees positive responsiveness that hastens quick recovery. The statement mean score of 4.12 and a standard deviation of 0.665 which was above the composite mean of 3.82 with standard deviation of

1.231 meaning that health care services provided guarantees positive responsiveness that hastens quick recovery influence provision of curative and preventive tuberculosis health care services. Lack of positive responsiveness of the patients may slower the recovery making it impossible to treat the disease effectively hence can lead to more infections thus not achieving the objectives. On the aspect of person centeredness, it was noticed that overall composite aspect of provision of curative and preventive tuberculosis health care services has 9.1% variability on the responses. This showed a fairly good agreement on the responses.

On vaccination, statement one; the health care services offers vaccine to those who are perceived to be affected. Out of 187 who respondents, 39 (20.9%) strongly disagree, 49 (26.2%) disagree, neutral 4 (2.1%), 60 (32.1%) agree and 35 (18.7%) strongly agree. The majority of the respondents that agreed were slightly higher than those who disagreed that the health care services offers vaccine to those who are perceived to be affected. The statement mean score of 3.02 with a standard deviation of 1.476 which was below the composite mean of 3.82 and standard deviation of 1.231 implying that the health care services offers vaccine to those who are perceived to be affected does not influence the provision of curative and preventive tuberculosis health care services. Therefore, health care providers should ensure that vaccine admission are given to those who are not affected as a preventive measure rather than perceived patient who might not have the infection.

Statement two; the vaccines are provided annually to curb the spread of the disease. Out of 187 who respondents, 11 (5.9%) strongly disagree, 20 (10.7%) disagree, neutral 5 (2.7%), 99 (52.9%) agree and 52 (27.8%) strongly agree. Most of the respondents agreed that the vaccines are provided annually to curb the spread of the disease. The statement mean score of 3.86 with a standard deviation of 1.118 which was above the compos its mean of 3.82 with standard deviation of 1.231 meaning that the vaccines are provided annually to curb the spread of the disease influence provision of curative and preventive tuberculosis health care services. Lack of the annual vaccines provision may have contributed to rampant increase of the disease making it difficult to control the spread.

Statement number three; the TB free individual has a high probability not to be affected. Out of 187 who respondents, 28 (15.0%) strongly disagree, 80 (42.8%) disagree, neutral 4 (2.1%), 48 (25.7%) agree and 27 (14.4%) strongly agree. The majority of the respondents

disagreed that the the TB free individual has a high probability not to be affected with a little majority holds contrary opinion. The statement mean score of 2.82 with a standard deviation of 1.356 which was below the composite mean of 3.82 with standard deviation of 1.231 implying that the TB free individual has a high probability not to be affected does not influence provision of curative and preventive tuberculosis health care services. Therefore, the public health care providers should sensitize the population about the spread of tuberculosis rather than the assumptions that might enhance the infection.

Statement number four; the administering of vaccine has significantly leads decrease of TB patients. Out of 187 who respondents, 2 (1.1%) strongly disagree, 6 (3.2%) disagree, neutral 4 (2.1%), 110 (58.8%) agree and 65 (34.8%) strongly agree. The majority of the respondents agreed that the administering of vaccine has significantly leads decrease of TB patients. The statement mean score of 4.23 with a standard deviation of 0.737 which was above the composite mean of 3.82 and standard deviation of 1.231 meaning that the administering of vaccine has significantly leads decrease of TB patients influence provision of curative and preventive tuberculosis health care services. However, lack of administering of the vaccine would have seen significant rise of figures infected which might have been contrary with the wold health organization objective of eradicating of the disease. On the aspect of accessibility, it was noticed that overall composite aspect of provision of curative and preventive tuberculosis health care services has 23.1% variability on the responses. This showed a bigger variability on the responses.

4.6 Human Capacity for M&E and Provision of Curative and Preventive Tuberculosis Health Care Services in Public Health Institutions

One of the first objectives the study aimed to achieve was to establish how human capacity for M&E influence provision of curative and preventive tuberculosis health care services in public health institutions. To achieve this, the respondents were asked to give their opinion in their level of agreement or disagreements with the statements using a Likert scale of 1-5. Where: 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree and 5 = Strongly Agree. The results are presented in Table 4.7.

Table 4.7; Human Capacity for M&E and Provision of Curative and Preventive Tuberculosis Health Care Services

Statements	1 f (%)	2 f (%)	3 f (%)	4 f (%)	5 f (%)	Mean	Std. Dev.	C.V
There is adequate M&E staff capacity for curative and preventive tuberculosis health care services.	2 (1.1)	40 (21.4)	13 (7.0)	115 (61.5)	16 (8.5)	3.54	0.974	27.5
Staff training on M&E has positive results in the implementation of curative and preventive tuberculosis health care activities.		14 (7.5)	31 (16.5)	123 (65.8)	19 (10.2)	3.97	0.974	18.2
The institutional staff has the technical ability to integrate M&E in curative and preventive tuberculosis health care programs.		13 (7.0)	20 (10.7)	107 (57.2)	47 (25.1)	4.01	0.800	20
The organizational staffs on M&E are trained on what is expected in order to deliver all the work needed within a specific time.		10 (5.3)	30 (16.0)	110 (58.9)	37 (19.8)	3.93	0.755	19.2
Effective work location that assures achievement of the set goals		6 (3.2)	23 (12.3)	121 (64.7)	37 (19.8)	4.01	0.672	16.8
Composite Mean and Std. Dev.						**3.85**	**0.487**	**12.9**

On Human capacity for M&Eand provision of curative and preventive tuberculosis health care services, statement number one; there is adequate M&E staff capacity for curative and preventive tuberculosis health care services. Out of 187 who responded, 2 (1.1%) strongly disagree, 40 (21.4%) disagree, 13 (7.0%) neutral, 115 (61.5%) agree, and 16 (8.6%) strongly agree. The majority of the respondents agreed that there was adequate M&E staff capacity to provide for curative and preventive tuberculosis health care services. The statement mean score of 3.54 with a standard deviation of 0.974 which was below the composite mean of 3.85 and standard deviation of 0.487 implying that there is adequate M&E staff capacity for curative and preventive tuberculosis health care services does not influence provision of curative and preventive tuberculosis health care services. However, there is moderate influence on the positive side that requires more effort in ensuring that there are adequate M&E staff with the technical know-how and experience on M&E integration in health care activities for effective delivery of tuberculosis health care services to the patients.

From these result, the M&E staff capacity were not adequately capable to handle the work load involved on provision of curative and preventive tuberculosis health care services to the patients. Therefore, the study recommends the need for the public health institutions management to ensure that they employ adequate M&E officers that will be able to cope with the magnitude that is involved on provision of curative and preventive tuberculosis health care services to patients in public health institutions.

Statement number two; staff training on M&E has positive results in the implementation of curative and preventive tuberculosis health care activities. Out of 187 who responded, 0 (0%) strongly disagree, 13 (7.0%) disagree, 31 (16.6%) neutral, 123 (65.8%) agree, and 19 (10.2%) strongly agree. The majority of the respondents agreed that staff training on M&E has positive results in the implementation of curative and preventive tuberculosis health care activities. The statement mean score of 3.97 with a standard deviation of 0.724 which was above the composite mean of 3.85 and standard deviation of 0.974 meaning that staff training on M&E has positive results in the implementation of curative and preventive tuberculosis health care activities influence provision of curative and preventive tuberculosis health care services to patients in public health institutions. Lack of human capacity that are not specialized on M&E may lead to poor implementation of health care activities thus making unrealistic in achieving the set objectives in fighting the disease.

Statement three; the institutional staff has technical ability to integrate M&E in curative and preventive tuberculosis health care programs. Out of 187 who responded, 0 (0%) strongly disagree, 13 (7.0%) disagree, 20 (10.7%) neutral, 107 (57.2%) agree, and 47 (25.1%) strongly agree. Most of the respondents agreed that the institutional staff has the technical ability to integrate M&E in curative and preventive tuberculosis health care programs. The statement mean score of 4.01 with a standard deviation of 0.800 was above the composite mean of 3.85 and standard deviation of 0.487 implying that the institutional staff has the technical ability to integrate M&E in curative and preventive tuberculosis health care programs influence provision of curative and preventive tuberculosis health care services to patients in public health institutions. However, the public health institutions that lack human resources capacity with M&E know-how may fail to implement the health care activities leading to the unsuccessful handling of the pandemic.

Statement number four; the organizational staffs on M&E are trained on what is expected in order to deliver all the work needed within a specific time. Out of 187 who responded, 0 (0%) strongly disagree, 10 (5.3%) disagree, 30 (16.0%) neutral, 110 (58.8%) agree while 37 (19.8%) strongly agree. The results indicated that the majority of the respondents agreed that the organizational staffs on M&E are trained on what is expected in order to deliver all the work needed within a specific time. The statement mean score of 3.93 with a standard deviation of 0.755 was above the composite mean of 3.85 with standard deviation of 0.487 implying that the organizational staffs on M&E are trained on what is expected in order to deliver all the work needed within a specific time influence provision of curative and preventive tuberculosis health care services. Organizational staff that are not aware with objectives to achieve may work contrary to the focus of the organization that will result in delays in delivering of intended health care services within the specified time which is against the WHO deadline to eradicate the disease.

Statement number five; effective work distribution that assures achievement of the set goals. Out of 187 who responded, 0 (0%) strongly disagree, 6 (3.2%) disagree, 23 (12.3%) neutral, 121 (64.7%) agree while 37 (19.8%) strongly agree. Most of the respondents agreed that effective work distribution that assures achievement of the set goals. The statement mean score of 4.01 with a standard deviation of 0.672 was above the composite mean of 3.85 and standard deviation of 0.487 meaning that effective work distribution that assures achievement of the set goals provision of curative and preventive tuberculosis health care services in public health institutions. Poor work distribution may lead to lack of effective implementation of work intended thus fail to achieve the intended objectives.

Least and highest coefficient of variance of 8.8% and 30.7% show that there was a variability of the responses. The coefficient of variance on the aspect of human capacity for M&E, it was noticed that overall composite aspect of provision of curative and preventive tuberculosis health care services has 10.2% variability on the responses. This showed fairly good agreement on the responses. On the multiple responses, the study sought to find out the challenges experienced when employing the use of monitoring and evaluation system. The respondent's results were as follows; on the challenges experienced due to lack of finances, limited budget and insufficiency of funds were 85.1%, lack of time12.2%, inadequate staff 9.5%, delays 1.4%, costly or expensive 8.1% and rigidity of log frame 2.7%

out of 156% were reported since each of the respondents had more than one response. Some of the medical doctors had this to say;

> *"That the major causes of inadequacy was as a result of allocation which was against the budget presented and on intervention, the response was that, the money received was to cater for other emergencies and the fix will be done during supplementary budget. There were more projects that installed due to the financial problems up to date and there was no guarantee that the funds will be provided to ensure the completion. So, it has been difficult to operate as the priority aspect of the set plan are not fully adhered to."*

4.6.1 Correlational Analysis of Human Capacity for M&E and Provision of Curative and Preventive Tuberculosis Health Care Services

Correlational analysis was done to establish the relationship between human capacities for M&E and provision of curative and preventive tuberculosis health care services to patients in public health institutions. The model summary show the correlation (r) and the coefficient of determination (R- square) = 0.073, where r = 0.270 indicating that human capacity for M&E explain 12.9% of the varied respondents score in human capacity for development and 87.1% of experienced by other factors not in the model that show a relative influence on provision of curative and preventive tuberculosis health care services at P = 0.000<0.05. The value of R squared (0.073) show that human capacity for M&E has a significant influence on provision of curative and preventive tuberculosis health care services to patients in public health institutions in Kisumu county at 0.05 level of significant. The results are presented in Table 4.8.

Table 4.8; Correlation of Human Capacity for M&E and Provision of Curative and Preventive Tuberculosis Health Care Services

Model	**Unstandardized Coefficients**		**Standard co-efficient**	**t**	**P - Value**
	B	**Std. error**	**Beta**		
Constant	31.109	1.1562		6.920	0.00
Human capacity for M&E	-0.227	0.59	0.227	-3.808	0.00

Predictors: (Constant), Human capacity for M&E

Variable: Provision of curative and preventive tuberculosis health care services

R = 0.270

R. Square = 0.073

F (14.498) = at a level of significant P = 0.00 < 0.05

$$Y_1 = 31.109 + 0.227X_1$$

The results show that there is a very week positive influence of logical framework for M&E on provision of curative and preventive tuberculosis health care services. A unit change (one percent) in human capacity for M&E would result in on nearly 1.2% change (increase) on provision of curative and preventive tuberculosis health care services. Monitoring and evaluation system explain the variation on provision of curative and preventive tuberculosis health care services only by 12.9% which is very weak.

The F ratio significant was F (14.498), P= 0.00<0.05. This Indicate that human capacity for M&E had a relatively weak and positive influence on provision of curative and preventive tuberculosis health care services. Therefore, the study results of the test reject the null hypothesis and accept the alternative hypothesis which implies that human capacity for M&E has a significant influence provision of curative and preventive tuberculosis health care services to patients in public health institutions in Kisumu County at 0.05 level of significant. With the composite mean of 4.09 the County's public health institutions could be attested that human capacity for M&E contribute significantly in relation to provision of curative and preventive tuberculosis health care services at r = 0.270, n =187, p=.000<0.05. The mean of 3.86 indicate that the public health institutions depend on human capacity for M&E as a driving force to achieve it set objectives contrary to lack of human resources with capacity in providing health care services might make it impossible to achieve set goals.

4.6.2 Regression Analysis between Human Capacity for M&E and Provision of Curative and Preventive Tuberculosis Health Care Services to Patients in Public Health Institutions

Regression analysis was done to determine the influence between human capacities for M&E and provision of curative and preventive tuberculosis health care services in public health institutions. The results are presented in Table 4.9.

Table 4.9; Regression Analysis of Human capacity for M&E and Provision of Curative and Preventive Tuberculosis Health Care Services

Model	Sum of Squares	df	Mean Square	F	Sig. level
Regression	56.599	2	56.599	14.498	0.00
Residual	722.223	185	3.904		
Total	778.822	187			

i. Predicator: (Constant), Human Capacity for M&E

ii. Dependent Variable: Provision for curative and preventive tuberculosis health care services

The human resource capacity for M&E in health care are significant in ensuring efficiency of provision of curative and preventive tuberculosis care services to patients. However, curative and preventive tuberculosis health care service are faced with challenges where the human resources lack M&E skills that is useful in the implementation of the relevant activities hence creates the barrier in discharging curative and preventive tuberculosis health care services to the tuberculosis patients as required (Buchan, 2004). The human resources for monitoring and evaluation are important in assuring the health care activities carried out with utmost concern and effective delivery of curative and preventive tuberculosis health care services are achieved (WHO, 2006).

Gorgens and Kusek, (2010) contribution to the human capacity for M&E as the human resources equipped with the skills needed that can be applied in the undertaking of the developing programs of the monitoring and evaluation. Therefore, it is necessary for the public health institutions to ensure that they have well-trained and skilled staff with the systems that can handle the variety of M&E tools in health care system that leads to the contribution on effective provision of curative and preventive health care services to patients (Mackay, 2007). More so, it indicated that human capacity for M&E systems might not work

properly if the involved staffs are not skilled with the M&E systems to perform the tasks. Therefore, it is necessary for the public health institutions to ensure that the have a well-trained and skilled staff with the systems that can handle the variety of M&E tools in health care system that leads to the contribution on effective provision of curative and preventive tuberculosis health care services to patients (Mackay, 2007).

4.6.3 Test of Hypothesis One

H_1: Human Capacity for M&E significantly influences the Provision of Curative and Preventive Tuberculosis Health Care Services to Patients in Public Health Institutions in Kisumu County

The hypothesis aimed at establishing the influence of human capacity for M&E provision of curative and preventive tuberculosis health care services to patients in public health institutions in Kisumu County. The composite index for the provision of curative and preventive tuberculosis health care services was employed as the dependent variable where the application of provision of curative and preventive tuberculosis health care services to; access, diagnosis, treatment, quality, continuity, person centeredness and vaccination were used as indicators. Human capacity for M&E, skilled M&E staff, staff training on M&E, technical ability on M&E, work allocation and M&E experience as indicators and its composite mean was employed as indicators and its composite mean was used the independent variable.

The test used was linear regression model;

$y = a + \beta_1 + X_1 + e$ Where;

y = Provision of curative and preventive tuberculosis health care services

a_1 = Constant

β_1 = Beta coefficient

X_1= Human capacity for M&E

e_1 = error term.

The results showed that the P-value was 0.005 which was below 0.05 level of significance and therefore the null hypothesis was rejected.

4.7 Logical Framework for M&E and Provision of Curative and Preventive Tuberculosis Health Care Services Patients in Public Health Institutions

The logical framework for monitoring and evaluation in health care service provision has been emphasized in a number of studies. The study sought to determine how logical framework influence provision of curative and preventive tuberculosis health care services in public health institution. To achieve this objective, the respondents were asked to give their opinion on their level of agreements and disagreements using Likert scale of 1 -5 where: Where: 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree and 5 = Strongly Agree. The results are presented in Table 4.10.

Table 4.10; Logical Framework for M&E and Provision of Curative and Preventive Tuberculosis Health Care Services

Statement	1 f (%)	2 f (%)	3 f (f)	4 f (%)	5 f (%)	Mean	Std. Dev.	C.V
The institution applies the use of logical framework in assessing curative and preventive tuberculosis health care activities.	1 (0.5)	16 (8.6)	27 (14.4)	117 (62.6)	26 (13.9)	3.81	0.800	21.0
Planning on the use of logical framework enhances accountability in delivery of tuberculosis health care services.		2 (1.1)	23 (12.3)	118 (63.1)	44 (23.5)	4.09	0.628	15.4
The use logical framework indicators help to monitor the progress in provision of curative and preventive health care activities.		2 (1.1)	49 (26.2)	96 (51.3)	40 (21.4)	3.93	0.719	18.3
The tool has an impact on the provision of curative and preventive tuberculosis health care services		1 (0.5)	24 (12.8)	126 (67.4)	36 (19.3)	4.05	0.584	14.4
Mitigation measures are in place in alignment with the objectives.		3 (1.6)	46 (24.6)	99 (52.9)	39 (20.9)	3.93	0.426	10.8
Composite Mean and Std. Dev.						**3.94**	**0.426**	**10.8**

Statement one; Indicators of logical framework for M&E are used in implementation of curative and preventive tuberculosis health care programs. Out of 187 who responded, 0 (0%) strongly disagree, 14 (7.5%) disagree, 20 (10.7%) neutral, 139 (74.3%) agree while 14 (7.5%) strongly agree. Most of the respondents agreed that Indicators of logical framework for M&E are used in implementation of curative and preventive tuberculosis health care programs. The statement mean score of 3.82 with a standard deviation of 0.671 which was below the composite mean of 3.94 and standard deviation of 0.426 implying that Indicators of logical framework for M&E are used in implementation of curative and preventive tuberculosis health care programs moderate positively influence provision of curative and preventive tuberculosis health care services.These results therefore, show that it is necessary to identify appropriate use of logical framework since it will significantly improve integration of health care activities leading to effective provision of curative and preventive tuberculosis health care services to patients in public health institutions. Lack of use of logical framework may lead to substandard processes in implementing effective health care thus make it impossible to achieve the set goals.

Statement two; the institution applies the use of logical framework in assessing curative and preventive tuberculosis health care activities.Out of 187 who responded, 1 (0.5%) strongly disagree, 16 (8.6%) disagree, 27 (14.4%) neutral, 117 (62.6%) agree, and 26 (13.9%) strongly agree. The majority of the respondents agreed that the institution applies the use of logical framework in assessing curative and preventive tuberculosis health care activities. The statement mean score of 3.81 with a standard deviation of 0.800 which was below the composite mean of 3.94 and standard deviation 0.426 meaning that the institution applies the use of logical framework in assessing curative and preventive tuberculosis health care activitiesthis shows a moderate positive influence provision of curative and preventive tuberculosis health care services. This means that there is need employ effective logical framework that meets its purpose and that will significantly impact provision of curative and preventive tuberculosis health care services in public health institutions.

Statement three; planning on the use of logical framework enhances accountability in delivery of tuberculosis health care services. Out of 187 who responded, 0 (0%) strongly disagree, 2 (1.1%) disagree, 23 (12.3%) neutral, 118 (63.1%) agree, and 44 (23.5%) strongly agree. The majority of the respondents agreed that planning on the use of logical framework

enhances accountability in delivery of tuberculosis health care services. The statement mean score of 4.09 with a standard deviation of 0.628 which was above the composite mean of 3.94 with a standard deviation of 0.4.26 implying that planning on the use of logical framework enhances accountability in delivery of tuberculosis health care services provision of curative and preventive tuberculosis health care services to patients in public health institutions. Therefore, accountability may not be achieved due to lack of logical framework to ensure accountability to achieve better results in health care provision. The logical framework therefore is an essential tool that contributes to a larger extent to the achievement of the institutional set objectives. One of the doctors said that,

> *"The logical framework is significant in its application that it cannot be ignored despite of the resistance in its introduction for use."*

Statement four; the use logical framework indicators to monitor the progress provision of curative and preventive tuberculosis health care services activities. Out of 187 who responded, 0 (0%) strongly disagree, 2 (1.1%) disagree, 49 (26.2%) neutral, 96 (51.3%) agree, and 40 (21.4%) strongly agree. Most of the respondents agreed that the use logical framework indicators to monitor the progress provision of curative and preventive tuberculosis health care activities. The statement mean score of 3.93 with a standard deviation of 0.719 which was below the composite mean of 3.94 with a standard deviation of o.426 meaning that the use logical framework indicators to monitor the progress on provision of curative and preventive tuberculosis health care services activities does not influence provision of curative and preventive tuberculosis health care services to patients in public health institutions. Therefore, is necessary to the public health institutions management to ensure that there appropriate logical indicator to monitor the progress of the provision of curative and preventive tuberculosis health care services are used as this will contribute to the achievement of the set objectives.

Statement five; the tool has an impact on the provision of curative and preventive tuberculosis health care services.Out of 187 who responded, 0 (0%) strongly disagree, 1 (0.5%) disagree, 24 (12.8%) neutral, 126 (67.4%) agree, and 36 (19.3%) strongly agree. The majority of the respondents agreed that the tool has an impact on the provision of curative and preventive tuberculosis health care services. The statement mean score of 4.05 with a standard deviation of 0.584 which was above the composite mean of 3.94 with a standard

deviation of 0.426 implying that the tool has an impact on the provision of curative and preventive tuberculosis health care services to patients in public health institutions. Logical framework has been regarded as a cornerstone in strengthening health care activities that lack of its application may affect the effective delivery of the needed health care activities in realization of the set goals.

Statement six; the mitigation measures are in place in alignment with the objectives. Out of 187 who responded, 0 (0%) strongly disagree, 3 (1.6%) disagree, 46 (24.6%) neutral, 99 (52.9%) agree while 39 (20.9%) strongly agree. The majority of the respondents agreed that the mitigation measures are in place in alignment with the objectives. The statement mean score of 3.93 with a standard deviation of 0.426 which was below the composite mean of 3.94 with a standard deviation of 0.426 implying that the mitigation measures are in place in alignment with the objectives does not influence provision of curative and preventive tuberculosis health care services to patients in public health institutions. Therefore, therefore, it is necessary for the public health institution management team to ensure that there are adequate health mitigation measures for the TB patients that will improve on effective provision of curative and preventive tuberculosis health care services. On the aspect of logical framework, it was noticed that overall composite aspect of provision of curative and preventive tuberculosis health care services has 10.8% variability on the responses. Therefore, this showed a quite good agreement on the responses.

4.7.1 Correlational Analysis between Logical Framework for M&E and Provision of Curative and Preventive Tuberculosis Health Care Services

Correlational analysis was done to establish the relationship between logical framework and provision of curative and preventive tuberculosis health care services to patients in public health institutions. The correlation coefficient r = 0.379 implies that logical framework for M&E to a greater influence on provision of curative and preventive tuberculosis health care services at P=0.000<0.05. The value of R squared = 0.143, indicating that the logical framework for M&E explain 98.2% of the respondents acknowledged that the use of logical framework and 10.8% is explained by other factors that not in the study. The results are presented in Table 4.11.

Table 4.11; Regression of Logical Framework for M&E and Provision of Curative and Preventive Tuberculosis Health Care Services

Model	Unstandardized Coefficients		Standard co-efficient	t	P - Value
	B	Std. error	Beta		
Constant	33.912	1.296	-0.379	26.173	0.00
Logical framework for M&E		-0.303	0.055	-5.565	0.00

Predictors: (Constant), Logical framework for M&E

Dependent Variable: Provision of curative and preventive tuberculosis health care services

R = 0.379

R. Square = 0.143

F (30.964) = at a level of significant P = 0.00 < 0.05

$$Y_1 = 33.912 + 0.303X_2$$

The results indicate that there is a very weak positive influence of logical framework for M&E on provision of curative and preventive tuberculosis health care services, though not statistically significant. Therefore, the results of the test reject the null hypothesis and accept the alternative hypothesis which implies that logical framework for M&E influence has a significant influence on provision of curative and preventive tuberculosis health care services to patients in public health institutions in Kisumu County at 0.05 level of significant. A unit change in the logical framework for M&E would result in 0.46%, less than half percent change (increase) on the provision of curative and preventive tuberculosis health care services. The monitoring and evaluation system explain the variation on the provision of curative and preventive tuberculosis health care services. The composite mean of 4.14 of the analysis indicate that logical framework for M&E significantly related to provision of curative and preventive tuberculosis health care at r = 0.379, n = 187, P = 0.00<0.05.

4.7.2 Regression Analysis between Logical Framework for M&E and Provision of Curative and Preventive Tuberculosis Health Care Services

Regression analysis was to determine the influence between logical framework for M&E and provision of curative and preventive tuberculosis health care services in public health institutions. The results are presented in Table 4.12.

Table 4.12; Regression Analysis of Logical Framework for M&E, M&E System and Provision for Curative and Preventive Tuberculosis Health Care Services

Model	Sum of Squares	df	Mean Square	F	Sig. level
Between groups	111.664	1	111.664	0.713	0.000
Within groups	667.158	186	3.606		
Total	778.882	187			

i. Predicator: (Constant), Logical framework for M&E

ii. Dependent Variable: Provision for curative and preventive tuberculosis health care services

The regression results show that logical framework for M&E have significant positive influence on provision of curative and preventive tuberculosis health care services in public health institutions in Kisumu County. The framework entails the detailed information that will help management in public health institutions in planning on how to undertake the various activities that empower the public health institutions in the realization of achieving the intended objectives (DFID, 1997). Logical framework aspect of evaluation creates confidence to health practitioners that the services provided will be of great significance in items of meeting the demands of the dire needs of the patients. (Bornstein, 2006) acknowledges that the logical framework is significance as it links the projects intended objectives with the process of achieving those objectives that will enable the health professionals to organize thinking, set performance indicators, and allocate responsibilities and Communicate Effectively.

The health care provision experiences a lot of complexities that might hinder on the effective delivery of health care services. The literature findings indicate that logical framework eases complexities of the program in terms of the funding the projects based on the financial and technical aspects of the projects within the funded organizations Barton, (1997). Health care services require inputs and output indicators which are easier to assess in comparison with

neither the effect nor impact indicators. Therefore, logical framework is essential in the planning of health programs (Iglar, 2011) since this will enable health providers to plan on the effective health care activities that meet the client's expectations.

4.7.3 Test of Hypothesis Two

Logical Framework Significantly Influences the Provision of Curative and Preventive Tuberculosis Health Care Services in Public Health Institutions in Kisumu County

The composite index for provision of curative and preventive tuberculosis health care services was employed as the depended variable while composite mean for logical framework for M&E was employed as the independent variable. The indicators for logical framework for M&E were indicators choice, knowledge on logical framework, use of logical framework and mitigation measures. A linear regression model was used;

$$Y_2 = a_2 + \beta_2 + X_2 + e_2 \qquad \text{Where;}$$

Y_2 = Provision of curative and preventive tuberculosis health care services

a_2 = Constant

β_2= Beta coefficient

X_2= Logical framework for M&E

e_2 = error term

The results indicated that the P-value was 0.05 and null hypothesis was rejected.

4.8 M&E Work Plan and Provision of Curative and Preventive Tuberculosis Health Care Services in Public Health Institutions

This was the third objective of the study. The study assessed how M&E work plan influence provision of curative and preventive tuberculosis health care services in public health institutions. To achieve this, the respondents were asked to give their opinion on their level of agreements or disagreements using Likert scale Where: 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree and 5 = Strongly Agree. The results are presented in Table 4. 13.

Table 4.13; M&E Work Plan and Provision of Curative and Preventive Tuberculosis Health Care Services

Statement	1 f (%)	2 f (%)	3 f (%)	4 f (%)	5 f (%)	Mean	Std. Dev.	C.V (%)
Finances availability for facilitation and implementation affect the curative and preventive tuberculosis health care activities.	1 (0.5)	4 (2.1)	8 (4.3)	148 (79.2)	26 (13.9)	3.94	0.426	10.8
Tuberculosis curative and preventive health care activities are completed within the stipulated time frame to help achieve institutional set objectives.	1 (0.5)	14 (7.5)	56 (30)	90 (48.1)	26 (13.9)	4.04	0.562	13.9
Tuberculosis health care programs are geared towards the institutional plan.			40 (21.4)	144 (61.0)	33 (17.6)	3.96	0.625	15.8
Health care activities progress is reviewed accordance to the Plan.		2 (1.1)	52 (27.8)	95 (50.8)	38 (20.3)	3.90	0.719	18.4
Work is scheduled based on the health care activities to be undertaken.		61 (1.1)	38 (20.3)	108 (58.9)	35 (19.7)	3.92	0.718	18.3
Composite mean and Std. Dev.						**3.90**	**0.447**	**11.5**

Statement number one; finances availability for facilitation and implementation affect the curative and preventive tuberculosis health care activities. Out of 187 who responded, 1 (1.1%) strongly disagree, 4 (2.1%) disagree, 8 (4.3%) neutral, 148 (79.1%) agree while 26 (13.9%) strongly agree. The majority of the respondents agreed that finances availability for facilitation and implementation influence the provision of curative and preventive tuberculosis health care services. The statement mean score of 3.94 with a standard deviation

of 0.426 which was above the composite mean of 3.90 and standard deviation of 0.447 implying that the finances availability for facilitation and implementation affect the curative and preventive tuberculosis health care activities influence provision of curative and preventive tuberculosis health care services in public health institutions. Lack of availability or inadequate of finances may hinder the effective implementation of the health programs as planned that make it impossible to effectively achieve the provision of curative and preventive tuberculosis health care services to patients.

Statement number two; tuberculosis curative and preventive health care activities are completed within the stipulated time frame to help achieve institutional set objectives. Out of 187 who responded, 1 (0.5%) strongly disagree, 14 (7.5%) disagree, 56 (29.9%) neutral, 90 (48.1%) agree while 26 (13.9%) strongly agree. The majority of the respondents agreed that tuberculosis curative and preventive health care activities are completed within the stipulated time frame to help achieve institutional set objectives. The statement mean score of 4.04 with a standard deviation of 0.562 which was above the composite mean of 3.90 with standard deviation of o.447 implying that tuberculosis curative and preventive health care activities are completed within the stipulated time frame to help achieve institutional set objectives influence provision of curative and preventive tuberculosis health care services in public health institutions. Failure to comply with the stipulated time frame hinders the institutions to achieve the set objectives of delivery of the needed health care services to the tuberculosis patients.

Statement number three; tuberculosis health care programs are geared towards the institutional plan.Out of 187 who responded, 0 (0%) strongly disagree, 0 (0%) disagree, 40 (21.4%) neutral, 144 (61.0%) agree while 33 (17.6%) strongly agree. Most of the respondents agreed that the TB patients face economic constraints for the health care services to access the treatment on provision of curative and preventive tuberculosis health care activities. The statement mean score of 3.96 with a standard deviation of 0.625 which was above the composite mean of 3.90 with a standard deviation of 0.447 implying that the patients face economic strain in accessing treatment influence provision of curative and preventive tuberculosis health care services in public health institutions. The distance and location of some of the public health institutions make it difficult for the patients to access these facilities due to lack of funds and infrastructure making hard to achieve the set goals.

Statement number four; health care activities progress is reviewed accordance to the plan. Out of 187 who responded, 0 (0%) strongly disagree, 2 (1.1%) disagree, 52 (27.8%) neutral, 95 (50.8%) agree and 38 (20.3%) strongly agree. Most of the respondents were in agreement that health care activities progress is reviewed accordance to the plan. The statement mean score of 3.90 with a standard deviation of 0.719 with standard deviation 0.447 which was equal to the composite mean of 3.90 implying that the health care activities progress is reviewed accordance to the plan equally influence provision of curative and preventive tuberculosis health care services in public health institutions. Health care services that are not reviewed contribute to the challenges that cannot be mitigated effectively in accordance to the plan.

Statement number five; Works are scheduled based on the health care activities to be undertaken. Out of 187 who responded, 0 (0%) strongly disagree, 6 (3.2%) disagree, 38 (20.3%) neutral, 108 (57.8%) agree while 35 (18.7%) strongly agree. Most of the respondents agreed that works are scheduled based on the health care activities to be undertaken. The statement mean score of 3.92 with a standard deviation of 0.718 which was above the composite mean of 3.90 with standard deviation of 0.477 implying that the works are scheduled based on the health care activities to be undertaken positively influence provision of curative and preventive tuberculosis care services in public health institutions. Health facilities with unscheduled work rarely mange to implement the intended activities and this may result in efficiency in implementing the intended program needed in delivery of services.

> *"The medical doctor interviewed stated that, the many of respondents pointed fingers to the finances that are either delayed by the national government or inadequate affect the public health care activities at the county level greatly but hopeful that this will change."*

On the aspect of M&E work plan, it was noticed that overall composite aspect of provision of curative and preventive tuberculosis health care services has 11.5% variability on the responses. This showed quiet good agreement on the responses.

4.8.1 Correlational Analysis betweenM&E Work Plan and Provision of Curative and Preventive Tuberculosis Health Care Services

Correlational analysis was done to establish the relationship between M&E work plan and provision of curative and preventive tuberculosis health care services in public health institutions. The results presented in table 4.15 indicate the correlation (r) and the coefficient of determination (R-square), where r = 0.167 that implies that M&E work plan have a greater influence on provision of curative and preventive tuberculosis health care services at P=0.000<0.05. The value of R-squared = 0.028 suggested that M&E work plan and 80% explain the greater influence from the study and 15.5% of other factors not covered in the model. The results are presented in Table 4.14.

Table 4.14; Correlational Analysis of M&E Work Plan and Provision of Curative and Preventive Tuberculosis Health Care Services

Model	**Unstandardized Coefficients**		**Standard co-efficient**	**t**	**P - Value**
	B	**Std. error**	**Beta**		
Constant	29.724	1.3012		2.842	0.000
M&E work plan	0.153	0.66	0.167	2.305	0.002

Predictors: (Constant), M&E work plan

Dependent Variable: provision of curative and preventive TB health care services

R = 0.167

R. Square = 0.028

F (5.513) = at a level of significant P = 0.00 < 0.05

i. Dependent Variable: Provision of curative and preventive tuberculosis health care services

$$Y_3 = 29.7244 + 0.153X_3$$

The results show that there is moderately weak positive correlation between M&E work plan on provision of curative and preventive tuberculosis health care services with a statistically significant. The monitoring and evaluation system explain the variation on the provision of curative and preventive tuberculosis health care services. The F ratio significant was F (5.513) at P= 0.00<0.05. This means that there was a statistical significant influence of monitoring and evaluation work plan on provision of curative and preventive tuberculosis

health care services. Therefore based on the results, the hypothesis is rejected and the alternative hypothesis is accepted. This confirms that monitoring and evaluation work plan significantly influence provision of curative and preventive tuberculosis health care services in Kisumu County. A unit change (one percent) in M&E work plan would change (increase) on provision of curative and preventive tuberculosis health care services by 11.5%.

4.8.2 Regression Analysis between M&E Work Plan and Provision of Curative and Preventive Tuberculosis Health Care Services

Regression analysis was to determine the influence between M&E work planand provision of curative and preventive tuberculosis health care services in public health institutions. The results are presented in Table 4.15.

Table 4.15; Regression Analysis of M&E Work Plan and Provision of Curative and Preventive Tuberculosis Health Care Services

Model	Sum of Squares	df	Mean Square	F	Sig. level
Regression	21.744	1	21.744	5.313	0.002
Residual	757.078	186	4.092		
Total	778.822	187			

i. Predicator: (Constant), M&E work plan

ii. Dependent Variable: Provision for curative and preventive tuberculosis health care services

The study results are evidenced that monitoring and evaluation work plan is fundamental and a necessity for the public health institution to achieve its objectives on the program budget allocation on health activities that ranges between five and ten percent of the program budget (Global Fund's Periodic Review 2012-2016). This will ensure the adequacy in the implementation of the M&E work plan activities flows as planned hence achieving the expected outcome. Tilbury, (2007) acknowledges that accountability in ensuring that the monitoring work plan is focused towards effective provision of curative and preventive tuberculosis health care services to patients. The work plan is focused to ensure that the implementation is done in reference to the monitoring and evaluation. Nonetheless, the work plan flexibility in nature enables for the adjustments that fits in the proposed health care M&E work plan.

4.8.3 Test of Hypothesis Three

Monitoring and Evaluation Work Plan Significantly Influence the Provision of Curative and Preventive Tuberculosis Health Care Services in Public Health Institutions in Kisumu County

The provision of curative and preventive tuberculosis health care services as the dependent variable of the influence of monitoring and evaluation and work plan was sought in the study. The indicators included finances for facilitation and implementation, time frame to achieve the work, program sequences and plan review. The composite mean of these indicators was computed and used in the analysis. The test used linear regression model;

$y_3 = a_3 + \beta_3 + X_3 + e_3$ Where;

y_3 = Provision of curative and preventive health care services

a_3 = Constant

β_3= Beta coefficient

X_3= M&E work plan

e_3 = error term

The results indicated that the P value was P=0.000<0.05 at a level of significance P =0.00< 0.05 that result null hypothesis was rejected.

4.9 Data Dissemination and Use and Provision of Curative and Preventive Tuberculosis Health Care Services in Public Health Institutions

The data dissemination and use in health care service provision has been emphasized in a number of studies. The study sought to determine how data dissemination and use influence provision of curative and preventive tuberculosis health care services in public health institutions. To achieve this objective, the respondents were asked to give their opinion on their level of agreements and disagreements using Likert scale of 1 -5 where: Where: 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree and 5 = Strongly Disagree. The results are presented in Table 4.16.

Table 4.16; Data Dissemination and Use and Provision of Curative and Preventive Tuberculosis Health Care Services

Statement	1 f (%)	2 f (%)	3 f (%)	4 f (%)	5 f (%)	Mean	Std. Dev.	C.V (%)
The institution has developed data collection system for curative and preventive tuberculosis health care activities.	10 (5.3)	72 (38.6)	93 (49.7)	12 (6.4)		3.57	0.695	19.5
The Data source for are defined by the institutions objectives of the program concerned.	4 (2.1)	26 (14.7)	128 (66.4)	29 (16.8)		3.97	0.617	15.5
The institution is concerned with the reliability of data collection instruments	1 (0.5)	34 (18.2)	46 (54.5)	50 (26.8)		4.07	0.684	16.8
Data accuracy is significant to the institutions decision making.	1 (0.5)	30 (16.0)	122 (65.2)	34 (18.3)		4.01	0.605	15.1
The analyzed data are utilized for planning on provision of curative and preventive tuberculosis health care program activities	2 (1.1)	44 (23.5)	104 (55.6)	37 (19.8)		3.94	0.689	17.5
Composite Mean and Std. Dev.						**3.91**	**0.466**	**11.8**

Statement one; the institution has developed data collection system for curative and preventive tuberculosis health care activities. Out of 187 who responded, 0 (0%) strongly disagree, 10 (5.3%) disagree, 72 (38.5%) neutral, 93 (49.7%) agree, and 12 (6.4%) strongly agree. the institution has developed data collection system for curative and preventive tuberculosis health care activities. The statement mean score of 3.57 with a standard deviation of 0.695 which was below the composite mean of 3.91 with standard deviation of 0.466 meaning that the institution has developed data collection system for curative and preventive tuberculosis health care activities does not influence provision of curative and preventive tuberculosis health care services in public health institutions. This could be attributed to the fact that data dissemination and use was given a priority therefore, the institution need to developed data framework that will enable them to collect the needed data that will be useful in planning and implementation of health programs.

Statement two; the data source for use are defined by the institutional objectives of the program concerned. Out of 187 who responded, 0 (0%) strongly disagree, 4 (2.1%) disagree, 26 (13.9%) neutral, 128 (64.8%) agree while 29 (15.5%) strongly agree. The majority of the respondents agreed that the data sources for use are defined by the institutional objectives of the program concerned. The statement mean score of 3.97 with a standard deviation of 0.617 which was above the composite mean of 3.91 with standard deviation of 0.466 implying that the data source for use are defined by the institutional objectives of the program influence provision of curative and preventive tuberculosis health care services. Data that are not defined focusing on the program intended, cannot be useful for the anticipated purpose that make it difficult to implement the programs that are needed for effective delivery of health care services.

Statement number three; the institution is concerned with the reliability of data collection instruments. Out of 187 who responded, 0 (0%) strongly disagree, 1 (0.5%) disagree, 34 (18.2%) neutral, 102 (54.5%) agree, and 50 (26.7%) strongly agree. The majority of the respondents agreed that the institution is concerned with the reliability of data collection instruments. The statement mean score of 4.07 with a standard deviation of 0.684 which was above the composite mean of 3.91 with standard deviation of 0.466 implying that the institution is concerned with the reliability of data collection instruments influence provision of curative and preventive tuberculosis health care services in public health institutions. The unreliable and unpredicted data collection instrument cannot be of any significant use since it will not conform to the standards in which the data was meant to fulfil.

Statement four; data accuracy is significant to the institutional decision making. Out of 187 who responded, 0 (0%) strongly disagree, 1 (0.5%) disagree, 30 (16.0%) neutral, 122 (65.2%) agree while 34 (18.2%) strongly agree. Most of the respondents agreed that the data accuracy is significant to the institutional decision making. The statement mean score of 4.01 with a standard deviation of 0.605 which was above the composite mean of 3.91 with standard deviation of 0.466 implying that data accuracy was significant to the institutional decision making influence provision of curative and preventive tuberculosis health care services in public health institutions. Therefore, inaccurate data cannot be used to make informed decision since it will not impact the institutional objective as expected.

Statement number five; the analyzed data are utilized for planning on provision of curative and preventive tuberculosis health care program activities. Out of 187 who responded, 0 (0%) strongly disagree, 2 (1.1%) disagree, 44 (23.5%) neutral, 104 (55.6%) agree while 37 (19.8%) strongly agree. The majority of the respondents agreed that the analyzed data are utilized for planning on provision of curative and preventive tuberculosis health care program activities. The statement mean score of 3.94 with a standard deviation of 1.339 which was above the composite mean of 3.91 and standard deviation of 0.466 meaning that, the analyzed data are utilized for planning on provision of curative and preventive tuberculosis health care program activities influence provision of curative and preventive tuberculosis health care services. However, the data may be collected but failure to analyze them will not guarantee it usefulness in the application for use on the delivery health care services to the patients. On the aspect of data dissemination and use, it was noticed that overall composite aspect of provision of curative and preventive tuberculosis health care services has 11.8% variability on the responses. This showed that there was a good agreement on the responses.

The multiple responses on data dissemination and use, the study sough to know from the respondents the challenges public health institutions experienced when processing data and the following responses were captured; on lack of adequate staff, the responses were 15.7%, time consumption and delays or slow had 95.7%, lack of skilled human capacity to handle data, accuracy, lack of expertise were 11.4%, data coding and presentation 5.7%, misunderstanding of results 1.4% and limitation of funds to enhance the process 2.9% were reported out of 132.9%.

4.9.1 Correlational Analysis between Data Dissemination and Use and Provision of Curative and Preventive Tuberculosis Health Care Services

The correlation (r) and the coefficient of determination (R-square, where r = 0.186 that means data dissemination and use in public health institutions had a great influence on provision of curative and preventive tuberculosis health care services at $P<0.05$. The R square value (0.034) suggest that data dissemination and use in public health institution explain 88.2% recorded from the respondent score in provision of curative and preventive tuberculosis health care services leaving 11.8% which were not captured in the model. The results are presented in Table 4.17.

Table 4.17; Correlational Analysis between Data Dissemination and Use and Provision of Curative and Preventive Tuberculosis Health Care Services

Model	Unstandardized Coefficients		Standard co-efficient	t	P - Value
	B	Std. error	Beta		
Constant	29.934	1.251	0.186 2	3.937	0.000
Data dissemination and use	0.163	0.063		-2.569	0.011

i. Predictors: (Constant), Data dissemination and use

ii. Dependent Variable: Provision of curative and preventive tuberculosis health care services

R = 0.186

R. Square = 0.34

F (6.600) = at a level of significant P = 0.00 < 0.05

$$Y_4 = 29.934 + 0.163X_4$$

The results indicated that there was moderate positive influence of data dissemination and use on provision of curative and preventive tuberculosis health care services therefore, this means that there is a statistically significant influence of data dissemination and use on provision of curative and preventive tuberculosis health care services. From these results, the null hypothesis was rejected and the alternative hypothesis accepted. Therefore, data dissemination and use has a significant influence on provision of curative and preventive tuberculosis health care services in public health institutions in Kisumu County at 0.05 level of significant. With the composite mean of 4.24 the County's public health institutions depends on data dissemination and use which is significant to the provision of curative and preventive tuberculosis health care services. Unit change (one percent) in data dissemination and use would result in 11.8% change (increase) on provision of curative and preventive tuberculosis health care services.

4.9.2 Regression Analysis between Data Dissemination and Use and Provision of Curative and Preventive Tuberculosis Health Care Services

Regression analysis was to determine the influence between data dissemination and use and provision of curative and preventive tuberculosis health care services in public health institutions. The results are presented in Table 4.18.

Table 4.18; Regression Analysis between Data Dissemination and Use and Provision of Curative and Preventive Tuberculosis Health Care Services

Model	Sum of Squares	df	Mean Square	F	Sig. level
Between groups	20.827	1	26.8276	.600	0.011
Residual	751.99		6186		4.065
Total	778.822	187			

i. Predicator: (Constant), Data dissemination and use

ii. Dependent Variable: Provision for curative and preventive tuberculosis health care services

The study literature acknowledges that public health institutions are on continuous, procedural gathering, decomposition, explanation and dissemination of the information which is significant in in improving delivery and improving health care services is significant (Teutsch and Churchill, 2000). Data dissemination in public health facilities are very significant since the dependency for the sound public health care depends on the data that contribute in the planning and implementation of effective health care. The study conducted by Fazekas *et al*, (2010) on the framework for assessing data use in improving and enhancing health services planning in Europe countries namely; (Germany, Australia, Canada and New Zealand) conclude that data is fundamental in the health care system since it enhances health provision to the patients. The journal reviewed acknowledges data importance on benchmarking that contribute to evaluation related between public health care institutions that can be interpreted differently that enhance the values of the provision of health services to the public Bossyns *et al.*, (2006).

4.9.3 Test of Hypothesis Four

Data Dissemination and Use Significantly Influence the Provision of Curative and Preventive Tuberculosis Health Care Services in Public Health Institutions in Kisumu County

Using the composite mean of provision of curative and preventive tuberculosis health care services, the regression analysis of data dissemination and use was done. These indicators were; data collection instrument, data source, reliable instrument, data accuracy and data analysis. The study composite of was employed as the predictor variable to test the hypothesis using a linear regression model was used;

$y_4 = a_4 + \beta_4 + X_4 + e_4$ Where;

y_4 = Provision of curative and preventive tuberculosis health care services
a_4 = Constant
β_4 = Beta coefficient
X_4= data dissemination and use
e_4 = error term

The resulted indicated that the P-value 0.000<0.0 5 at a level of significance of 0.05 therefore, the null hypothesis was rejected.

4.10 Combined Monitoring and Evaluation System and Provision of Curative and Preventive Tuberculosis Health Care Services in Public Health Institutions

The study results of combined influence of monitoring and evaluation system on provision of curative and preventive tuberculosis health care services, the composite means and standard deviations of all the activities in each category were calculated to provide a descriptive analysis of these variables and then comparisons were done. The means and standard deviations in show that only M&E system on human capacity for M&E had a mean 3.85 with a composite mean of 3.90 meaning that human capacity for M&E had moderately stronger influence provision of curative and preventive tuberculosis health care services in public health institutions. Logical framework for M&E had a mean of 3.94 with a composite mean of 3.90, M&E work plan had a mean of 3.90 with a composite mean of 3.90 and data dissemination and use had 3.91 with a composite mean of 3.90 implying that the combined

M&E system to the greater extent significantly influence provision of curative and preventive tuberculosis health care services in public health institutions. However, lack of monitoring and evaluation system which has the potential to be a cornerstone of the health system strengthening which provide informed implementation and scale up of the focused health programs may not be achieved. The results are presented in Table 4.19.

Table 4.19; Combined M&E System and Provision of Curative and Preventive Tuberculosis Health Care Services

Description	n	Mean	Std. Dev.	CV %
Human capacity for M&E	187	3.85	0.487	12.9
Logical framework for M&E	187	3.94	0.426	10.8
M&E work plan	187	3.90	0.447	11.5
Data dissemination and use	187	3.91	0.466	11.8
Composite Mean and Std. Dev.		**3.90**	**0.38**	**89.95**

The composite mean for combined M&E system was 3.90 and standard deviation of 0.388. This suggests that M&E system are used in public health institutions to a greater extent. The results was measured using a 5 point Likert Scale, this finding indicate that M&E system should be embraced more in the public health institutions as it contribute significantly in the achievement of the set objectives. On the aspect of combined M&E system, it was noticed that overall composite aspect of provision of curative and preventive tuberculosis health care services has 9.95% variability on the responses. This showed that there was a unanimous response.

Interviews conducted revealed that despite the adoption of M&E system, the aspect of consistency and sustainability should be focused since the contribution of M&E system was fundamental on provision of health care services. The M&E system variables were all performed and the result acknowledged the significance of the M&E system integrated in health care activities. The M&E officer interviewed indicated that;

> *"Despite the significance of M&E system cooperation in health care activities in public health institutions, there is need for adequate allocation to M&E activities that would enable total application of the system."*

The concept of M&E system is seen as improving in the provision of health activities due to the government adoption and a framework that is mandatory to be used in public health institutions. Monitoring and evaluation officer said that,

> "*In the event of the new program, the M&E staffs are prepared towards the intended projects since the results expected are used in planning implementation of health care activities. The government more so, calls for the M&E reports to evaluate and access its impact to the delivery of the health care services to the public." This will help in responding to the various issues raised on the application of M&E system in public health institutions."*

The analysis of the study therefore, concludes that M&E system is fundamental in the planning and implementation of the beneficial tuberculosis health care services in public health institution. The study found out that there is need to enhance the M&E system framework with adequate support that would ensure that public health institutions need in various health provision are addressed and that can be as well as be determined to ensure that the expected standards are met.

4.10.1 Correlational Analysis of Combined M&E System and Provision of Curative and Preventive Tuberculosis Health Care Services

The correlation (r) and the coefficient determination (R-square), where r = 0.402 implying that combined M&E systems have a higher influence on provision of curative and preventive tuberculosis at $P<0.05$. Therefore, the tests results conclude that, the null hypothesis was rejected and the alternative hypothesis accepted The value R squared 0.162 suggest that combined M&E system explain 60.3% of the variance of the respondents score in provision of curative and preventive tuberculosis health care services and 39.7% is explained by other factors not in factored in the model. The results are presented in Table 4.20.

Table 4.20; Regression Analysis of Combined M&E System and Provision of Curative and Preventive Tuberculosis Health Care Services

Model	Unstandardized Coefficients		Standard co-efficient	t	P - Value
	B	Std. error	Beta		
Constant	34.045	1.542		22.085	0.000
Human capacity for M&E	0.86	0.074	0.175	-1.170	0.244
Logical framework for M&E	-.3160.082		-.084	0.367	0.000
M&E work plan	0.1610.88		0.346	1.830	0.069
Data dissemination and use	0.0660.073		-.002	-.076	0.362

a. Predictors: (Constant), M&E system

b. Dependent Variable: provision of curative and preventive tuberculosis health care services

R = 0.402

R. Square = 0.162

F (8.785) = at a level of significant P = 0.00 < 0.05

$$Y_5 = 34.045 + 0.86X_1 - 0.316X_2 + 0.161X_3 + 0.066X_4$$

The results show that there is a moderate positive influence of combined M&E system on provision of curative and preventive tuberculosis health care services, though not statistically significant combined except on M&E work plan (with a P value of 0.012). Therefore, from the results, the hypothesis was rejected and the alternative hypothesis was accepted. Therefore, the conclusion arrived at was that combined M&E system has significant influence on provision of curative and preventive tuberculosis health care services.

Unit change in (percent) in human capacity for M&E would result in change by 0.69% (increase) on provision of curative and preventive tuberculosis health care services, though not statistically significant. Similarly, much change (increase) in logical framework for M&E would result in change (decrease) by 0.38% (nearly third percent) on provision of curative and preventive tuberculosis health care services, which is not statistically significant.

Unit change (percent) in M&E work plan would result in change (increase) by 1.68% on provision of curative and preventive tuberculosis health care services, which is statistically significant. Finally, unit change (percent) in data dissemination and use would change (increase) by 0.01% (almost no change) on provision of curative and preventive tuberculosis health care services, which is not statistically significant.

The study literature confirms that monitoring and evaluation system feedback acts like framework for learned lessons which mitigate the issues affecting the program as well as enhancing the future decision making so to enable the program achieve its intended purpose (Khan, 1998). The monitoring and evaluations systems that are result oriented contributes to the effective and produce effective delivery frequencies of the intended results and the objectives of the program (Edmunds *et al*., 2008). Monitoring and evaluation system on the community based health care on tuberculosis/HIV programs Marshall and Fehringer, (2013), acknowledges that M&E system enhances health care activities that yield positive results that are expected. The study results indicated that M&E system significantly contribute to the provision of curative and preventive tuberculosis health care services in public health institutions.

4.10.2 Test of Hypothesis Five

Combined Monitoring and Evaluation System significantly influence the provision of curative and preventive tuberculosis health care services in public health institutions in Kisumu County

The focus was to entirely establish the influence of combined M&E system on provision of curative and preventive tuberculosis health care services. The composite mean of provision of curative and preventive tuberculosis health care services were used as the dependent variable and indicators that included; accessibility, diagnosis, treatment, quality, continuity, person centeredness and vaccination. The computation was done using linear regression model was used;

$$Y_5 = a_5 + \beta 5_1 X_1 + \beta 5_2 X_2 + \beta 5_3 X_3 + \beta 5_4 X_4 + e_5$$ Where;

y = M&E System

$B_5 \ldots B_5$= Beta coefficient

X_1 = Human Capacity for M&E

X_2 = Logical framework for M&E

X_3 = M&E Work Plan

X_4 = Data dissemination and use

e_5 = error term

The P-value results of combined M&E system was P-value of 0.000<0.05 at a level of significance of P = 0.00 < 0.05 thus the study null hypothesis was rejected.

4.11 Stakeholder Participation, M&E System and Provision of Curative and Tuberculosis Health Care Services in Public Health Institutions

The stakeholder participation ensures that the situations arises from M&E system and M&E activities contribute to the public health institutions on the perception of which they view M&E system differently. However, the situations arises from this view were addressed by the study looking at these factors; decision making, planning, empowerment and consultancy into the aspect of cooperation in the public health institutions in which the study addressed. The results are presented in Table 4.21.

Table 4.21; Stakeholder Participation, M&E System and Provision of Curative and Preventive and Preventive Tuberculosis Health Care Services

Statements	1 f (%)	2 f (%)	3 f (%)	4 f (%)	5 f (%)	Mean	Std. Dev.	C.V (%)
Public health institutional decision making is based on set objectives.	1 (0.5)	1 (0.5)	27 (14.4)	127 (67.9)	31 (16.7)	3.99	0.618	15.5
The health institutional management support planning that is focused on the achievement of its objectives.		1 (0.5)	23 (12.3)	112 (59.9)	51 (27.3)	4.14	0.632	15.3
The institution empowers its staff to achieve significant impact in the implementation of the curative and preventive tuberculosis health program activities.		3 (1.6)	26 (13.6)	111 (59.5)	47 (25.3)	4.08	0.671	16.4
The institutional consult on M&E values in implementing the health programs.		8 (4.3)	37 (19.8)	106 (56.7)	36 (19.2)	3.91	0.746	19.0
Composite Mean and Std. Dev.						**4.03**	**0.441**	**11.6**

Statement number one; public health institutional decision making is based on set objectives. Out of 187 who responded, 1 (0.5%) strongly disagree, 1 (0.5%) disagree, 27 (14.4%) neutral, 127 (67.9%) agree, and 31 (16.6%) strongly agree. The majority of the respondents agreed that public health institutional decision making is based on set objectives. However, slightly above average respondents disagreed that. The statement mean score of 3.99 with a standard deviation of 0.618 which was below the composite mean of 403 and standard deviation of 0.441 implying that the public health institutional decision making is based on set objectives does not influence provision of curative and preventive tuberculosis health care services. Therefore, there is need to embrace decision making that are based on set objectives as this may hamper the attainment of the set goals. Institutional consultancy on M&E values in implementing the health programs result are poorly implemented health programs that influence the dependent variable negatively.

Statement two; the health institutional management support planning that is focused on the achievement of its objectives. Out of 187 who responded, 0 (0%) strongly disagree, 1 (0.5%) disagree, 23 (12.3%) neutral, 112 (59.9%) agree, and 51 (27.3%) strongly agree. The majority of the respondents agreed that the health institutional management support planning that is focused on the achievement of its objectives. The statement mean score of 4.14 with a standard deviation of 0.632 which was above the composite mean of 4.03 with standard deviation of 0.441 implying that the health institutional management support planning that is focused on the achievement of its objectives influence provision of curative and preventive tuberculosis health care services in public health institutions. Lack of management in terms of financial, moral support and ownership in the achievement of institutional objectives may not succeed hence such will contribute to the incomplete implementation of the program. So, the management support is significant in the achievement of organizational goals.

Statement number three; the institution empowers its staff to achieve significant impact in the implementation of the curative and preventive tuberculosis health program activities. Out of 187 who responded, 0 (0%) strongly disagree, 3 (1.6%) disagree, 26 (13.9%) neutral, 111 (59.4%) agree, and 47 (25.1%) strongly agree. Most of the respondents agreed that the institution empower its staff to achieve significant impact in the implementation of the curative and preventive tuberculosis health program activities. The statement mean score of 4.08 with a standard deviation of 0.671 which was above the composite mean of 403 with standard deviation of 0.441 implying that the institution empower its staff to achieve significant impact in the implementation of the curative and preventive tuberculosis health program activities provision of curative and preventive tuberculosis health care services in public health institutions. However, lack of empowering employees may demoralize them to the extent that it affect the achievement of organizational set objectives.

Statement four; the institutional consult on M&E values in implementing the health programs. Out of 187 who responded, 0 (0%) strongly disagree, 8 (4.3%) disagree, 37 (19.8%) neutral, 106 (56.7%) agree, 36 (19.8%) strongly agree. The majority of the respondents agreed that the institutional consult on M&E values in implementing the health programs. The statement mean score of 3.91 with a standard deviation of 0.746 which was below the composite mean of 4.03 with standard deviation of 0.441 implying that the institutional consult on M&E values in implementing the health programs does not influence

provision of curative and preventive tuberculosis health care services. Therefore, there is need to adhere to the institutional consultations on M&E values that will ensure improvement of performance on provision of curative and preventive tuberculosis health care services in public health institutions. On the aspect of stakeholder participation, it was noticed that overall composite aspect of provision of curative and preventive tuberculosis health care services has 11.6% variability on the responses. This showed that there was a fairly good agreement on the responses. However, one of the medical doctor states that,

> *"There are signs of more stakeholder involvement experienced From the private sector and the community which is likely to improve that will impact the public health institutions positively in achieving the intended objectives."*

This could be observed as an application of the stakeholder's participation theory is inevitable in the processes of delivery effective curative and preventive health care services to the public. This theory is therefore, focused on the effective utilization of the stakeholders to achieve the organizational objectives Freeman, (2003).

4.11.1 Correlational Analysis of Intervening Influence of Stakeholder Participation on relationship between M&E System and Provision of Curative and Preventive Tuberculosis Health Care Services

The multiple regression analysis was used in order to test the influence of stakeholder participation on the relationship between M&E system and provision of curative and preventive tuberculosis health care services. The results presented in the table 4.20 show that stakeholder participation explained 11.6% variation on the provision of curative and preventive tuberculosis health care services (R-square=0.015). The values were statistically significant F= 2.828 and P=0.000<0.05 suggesting that stakeholder participation has a statistically significant influence on the provision of curative and preventive tuberculosis health care services. Therefore from the results, we reject the null hypothesis and accept alternative hypothesis. The results are presented in Table 4.22.

Table 4.22; Regression of Intervening Influence of Stakeholder Participation on Relationship between M&E System and Provision of Curative and Preventive Tuberculosis Health Care Services

Model	Sum of Squares	f	Mean Square	F	Sig.
Regression	11.725	1	11.725	2.828	0.094
Residual	767.098	186	4.146		
Total	778.822	187			

i. Predictors: (Constant), Consultancy, Planning, Empowerment, Decision Making

ii. Dependent Variable: Provision for curative and preventive tuberculosis health care services

ANOVA tests were conducted to determine the intervening influence of stakeholder participation on the relationship between M&E system and Provision for curative and preventive tuberculosis health care and services. These results indicate that the intervening influence of stakeholder participation on the relationship between M&E system and provision of curative and preventive tuberculosis health care services was statistically significant.

4.11.2 Regression Analysis of Intervening Influence of Stakeholder Participation on the relationship between M&E System and Provision of Curative and Preventive Tuberculosis Health Care Services

ANOVA tests was conducted to determine the intervening influence of stakeholder participation on the relationship between M&E system and provision of curative and preventive tuberculosis health care services. The results are presented in table 4.23.

Table 4.23; Regression Analysis of Stakeholder Participation, M&E System and Provision of Curative and Preventive Tuberculosis Health Care Services

Model	**Unstandardized Coefficients**		**Standard co-efficient**	**t**	**P - Value**
	B	**Std. error**	**Beta**		
Constant	29.039	1.373	-0.1232	1.143	0.000
Composite stakeholder Participation	-0.142	-1.698	0.001		
Composite M&E system	4.6032	5.841	0.252		
R = 0.123					
R. Square = 0.015					
F (2.828) = at a level of significant P = 0.00 < 0.05					

i. Predictors: Stakeholder participation

ii. Dependent Variable: Provision of curative and preventive TB health care services

$$Y_6 = 29.039 + 0.1422Z + 4.6032X$$

The results presents the different tests of stakeholder participation (intervening variable) with the purpose to find out if the provision of curative and preventive tuberculosis health care services is changed by manipulating influence of monitoring and evaluation system (independent variable). The tests results show that there are statistically significant differences between the means.

The results of coefficient value show weak positive relationship on the intervening influence of stakeholder participation on the relationship between M&E system and provision of curative and preventive tuberculosis health care services. This implies that the stakeholder

participation of the public health institutions enable the management to ensure that the set objectives are met. Unit change in (percent) in composite stakeholder participation would result in change by 5% (increase) on provision of curative and preventive tuberculosis health care services, though not statistically significant.

4.11.3 Test of Hypothesis Six

Stakeholder participation significantly intervening influence the relationship Between monitoring and evaluation system and provision of curative and Preventive tuberculosis health care services in public health institutions in Kisumu County

This hypothesis sought to establish the intervening influence of stakeholder participation on provision of curative and preventive tuberculosis health care services. The intervening influence on a regression model indicated the influence on independent variable on dependent variable as a function of a third variable of the study. The focus was to see how the influence of the independent variable changes when the intervening variable is introduced in the model. The intervening variable of the study was stakeholder participation in public health institution.

The aim was to find out how the relationship between M&E system and provision of curative and preventive tuberculosis health care services would be intervened by stakeholder participation. The intervening influence was measured in terms of how independent variable changes when the intervening variable is introduced. The M&E system were focused on improving stakeholder participation for effective provision of curative and preventive tuberculosis health care services. The provision of curative and preventive tuberculosis health care services was employed as the criterion and the composite mean of combined M&E system as the dependent variable and intervening variable as the intervening variable. The regression model was expressed as;

$$Y_6 = a_6 + \beta_{61} X_6 + \beta_{62} Z + e_6$$

Where X = Composite score of M&E system

Z = Composite stakeholder participation

a_6 = Constant

β_{61} and β_{62} Coefficients

The study results indicated that the P-value was 0.000<0.05 at a level of significance of 0.05 and therefore the study null hypothesis was rejected.

4.12 Organizational Structure, M&E System and Provision of Curative and Preventive and Tuberculosis Health Care Services in Public Health Institutions

The organizational structure exists within each and every institution to help in the management of various activities in achieving its objectives. These study organizational structures are meant to facilitate the needed process that would allow public health institutions to improve. The role was to determine the moderating influence of organizational structure on the relationship between monitoring and evaluation systems and provision of curative and preventive tuberculosis health care services in public health institutions. The study frequency activities of organizational structure were different forms of organization structures which include; centralized structure, flexible structure, decentralized structure and complex structure. The activities investigated and results are presented in Table 4.24.

Table 4.24; Organizational Structure, M&E System and Provision of Curative and Preventive Tuberculosis Health Care Services

Statement	1 f (%)	2 f (%)	3 f (%)	4 f (%)	5 f (%)	Mean	Std. Dev.	C.V (%)
The centralized format allows for the confinement of delivery of health care services to the closely residents.	36 (19.3)	70 (37.4)	10 (5.3)	60 (32.1)	11 (5.9)	2.68	1.267	47.3
Flexibility of the institution allows people to work and accomplish what are expected of them.	14 (7.5)	36 (19.2)	40 (21.4)	74 (39.6)	23 (12.3)	3.30	1.139	35.5
The institutional decentralized system leads to more effective decision making.		2 (1.1)	33 (18.9)	105 (57.1)	47 (22.9)	4.05	0.686	16.9
The complex nature resulted in emergency preparedness to ensure the achievement of set objectives.	9 (4.8)	28 (15.0)	14 (7.5)	105 (56.1)	31 (16.6)	3.65	1.074	23.1
Composite Mean and Std. Dev.						**3.42**	**0.793**	**22.8**

Statement one; the centralized organizational structure was the least format that allows for the confinement of delivery of health care services to the closely residents. Out of 187 who responded, 36 (19.3%) strongly disagree, 70 (37.4%) disagree, 10 (5.3%) neutral, 60 (32.1%) agree, and 11 (5.9%) strongly agree. The majority of the respondents agreed that the centralized organizational structure was the least format that allows for the confinement of delivery of health care services to the closely residents. The statement mean score of 2.68 with a standard deviation of 1.267 which was below the composite mean of 3.42 and standard

deviation of 0.793 means that the centralized organizational structure was the least format that allows for the confinement of delivery of health care services to the closely residents does not influence provision of curative and preventive tuberculosis health care services. This could be as a result of bureaucratic nature that are involved that bottle neck that hinders effective provision of curative and preventive tuberculosis health care services. Therefore, it is necessary to adopt the use of organization structure that will enhance effective and efficiency on provision of curative and preventive tuberculosis health care services hence achieving public health care organizational objectives.

Statement two; flexibility of the institution allows people to work and accomplish what are expected of them. Out of 187 who responded, 14 (7.5%) strongly disagree, 36 (19.3%) disagree, 40 (21.4%) neutral, 74 (39.6%) agree, and 23 (12.3%) strongly agree. The majority of the respondents agreed that the flexibility of the institution allows people to work and accomplish what are expected of them. The statement mean score of 3.30 with a standard deviation of 1.139 which was below the composite mean of 3.42 and standard deviation of 0.793 implying that flexibility of the institution allows people to work and accomplish what are expected of them does not influence provision of curative and preventive tuberculosis health care services. Therefore, there is need to employ a suitable structure that would ensure that employees could work towards the achievement of the set objectives.

Statement number three; the institutional decentralized system leads to more effective decision making. Out of 187 who responded, (0%) strongly disagree, 2 (1.1%) disagree, 33 (17.6%) neutral, 105 (56.1%) agree, while 47 (25.1%) strongly agree. The majority of the respondents agreed that the institutional decentralized system leads to more effective decision making. The statement mean score of 4.05 with a standard deviation of 0.686 which was above the composite mean of 3.42 and standard deviation of 0.793 implying that the institutional decentralized system leads to more effective decision making influence provision of curative and preventive tuberculosis health care services in public health institutions. However, failure to capitalize on the decentralized system, may still hinder on how informed decision that are beneficial to the organization are made thus making impossible to implement them thus contributing to the achievement of the set objectives.

Statement number four; the complex nature resulted in emergency preparedness to ensure the achievement of set objectives. Out of 187 who responded, 4 (4.8%) strongly disagree, 28 (15.0%) disagree, 14 (7.5%) neutral, 105 (56.1%) agree, and 31 (16.6%) strongly agree. The majority of the respondents agreed that the complex nature resulted in emergency preparedness to ensure the achievement of set objectives. The statement mean score of 3.65 with a standard deviation of 1.074 which was above the composite mean of 3.42 with standard deviation of 0.793 meaning that the complex nature resulted in emergency preparedness to ensure the achievement of set objectives influence provision of curative and preventive tuberculosis health care services in public health institutions. However, one of the nurses indicated that,

> *"Though the decentralized organizational structure has been perceived to be one of the effective way that ensure of effective health care services provision but it does not provide for the immediate and efficient approach on the planning, funding and implementation of the health programs intended at the county level."*

On the aspect of accessibility, it was noticed that overall composite aspect of provision of curative and preventive tuberculosis health care services has 22.8% variability on the responses. This showed among the responses were on a good agreement.

4.12.1 Correlational Analysis of Moderating Influence of Organizational Structure on the relationship between M&E System and Provision of Curative and Preventive Tuberculosis Health Care Services

The correlation (r) and the coefficient determination (R-square), where r = 0.330 implying that combined M&E systems have a higher influence on provision of curative and preventive tuberculosis at P = 0.00<0.05. Therefore, the tests results conclude that, the null hypothesis was rejected and the alternative hypothesis accepted. The value R squared 0.109 suggest that moderating organizational structure explain 10% of the variance of the respondents score in provision of curative and preventive tuberculosis health care services and 90% is explained by other factors not in factored in the model. The composite score of the organizational structure indicators which were computed using regression model. The indicators were; centralization, flexibility, decentralization and complexity of the organizational structure.

4.12.2 Regression Analysis of Moderating Influence of Organizational Structure on the relationship between M&E System and Provision of Curative and Preventive Tuberculosis Health Care Services

ANOVA tests were carried out to establish the moderating influence of organizational structure on the relationship between M&E system and provision of curative and preventive tuberculosis health care services. The results show that the moderating influence of organizational structure on the relationship between M&E system and provision of curative and preventive tuberculosis health care services was statistically significant. The results are presented in Table 4.25.

Table 4.25; Regression Analysis of Moderating Influence of Organizational Structure on the relationship between M&E System and Provision of Curative and Preventive Tuberculosis Health Care Services

Model	Sum of Square	df	Mean Square	F	Sig
Regression	44.927	1	44.9251	1.325	0.001
Residual	733.897	186	3.967		
Total	778.822	187			

i. Predictors: (Constant), Complexity, Decentralization, Centralization, Flexibility

ii. Dependent Variable: Provision for curative and preventive health care services

The regression ANOVA results presents a significant level of 0.05 shows that different exists4ewhen there is no actual difference. The P-value in table above is lesser than the level of significance and therefore, we reject the null hypothesis and conclude that not all of population means are equal.

The composite of moderating organizational structure of mean square of 13.977 influences of composite of monitoring and evaluation system of mean square 74.416 and the combined composite of organizational structure and the monitoring and evaluation of square mean of 29.267 on the dependent variable of provision of curative and preventive tuberculosis health care services. These results revealed that there coefficient correlation among the variables. The results are presented in Table 4.26a.

Table 4.26a; Regression Analysis of Moderating Influence of Organizational Structure on the Relationship between M&E System and Provision of Curative and Preventive Tuberculosis Health Care Services

Model	Unstandardized Coefficients		Standardized Coefficient		
	B	Std. Error	Beta	t	P-value
(Constant)	0.28862	0.646	0.2464	4.664	0 .000
Composite Organizational Structure	0.69704				0.001
Composite M&E System	6.0710	-3.365	0.051		
R = 0.240					
R- Square = 0.058					
F (11.325) at a significant level of P = 0.00<0.05					

i. Predictors; Organizational Structure

ii. Dependent Variable: Provision for curative and preventive tuberculosis health care services

$$Y_{7a} = 0.28862 + 6.0710X + 0.69707W \text{ (Moderation through addition)}$$

Regression analysis was to determine the influence between organizational structure and provision of curative and preventive tuberculosis health care services in public health institutions. The results are presented in Table 4.26b.

Table 4.26b; Regression Analysis of Moderating Influence of Organizational Structure on the relationship between M&E System and Provision of Curative and Preventive Tuberculosis Health Care Services

Model	Unstandardized Coefficients		Standardized Coefficient		
	B	Std. error	Beta	t	P - Value
(Constant)	0.28862	0.646	0.246	44.664	0.000
Composite Organizational Structure and M&E System	0.69704				0.001
Composite M&E System	6.0710	-3.365	0.051		
R = 0.240					
R- Square = 0.058					
F (11.325) at a significant level of P = 0.00<0.05					

i. Predictors; Organizational Structure
ii. Dependent Variable: Provision for curative and preventive tuberculosis health care services

$$Y_{7b} = 0.28862 + 6.0710X + 0.155X_1 \text{ (Moderation through multiplication)}$$

Where $X_1 = X.W$

The coefficient value though show moderate positive relationship on the moderating influence of organizational structure on the relationship between M&E system and provision of curative and preventive tuberculosis health care services. This implies that the organizational structure contribute to the achievement of the public health institutions objectives.

Unit change in (percent) in centralization would result in change by 0.50% (increase) on provision of curative and preventive tuberculosis health care services, though not statistically significant. Similarly, much change (increase) in flexibility would result in change (increase) by 1.37% on provision of curative and preventive tuberculosis health care services, which is not statistically significant. Unit change (percent) in decentralization would result in change (increase) by 2.15% on provision of curative and preventive tuberculosis health care services, which is not statistically significant. Finally, unit change (percent) in complexity would change (increase) by 2.54%) on provision of curative and preventive tuberculosis health care services, which is not statistically significant.

The reviewed literature revealed that organizational structure is the framework in which the entire if not all organizational functions are pegged on that to help the organization through its management to achieve its objectives as well as its strategy Robin and DeCenzo, (2005). This was viewed as the backbone in which the management of the organizations through it sub-systems or departments are established that work structurally separate but work as a unit in which the organization leadership hope to achieve and sustain the health care that meet the demands of the public Chiarini and Vagnoni, (2015).

The study conducted by Aikins *et al*., (2013) on evaluation of evaluation of institutional structure, facilitating supervisory visits in primary health care service delivery in the Upper West Region of Ghana. The study found that effective health system must have a well-established structure that enhances its operations to deliver the expected health care services across the region to the population. Swanson *et al*., (2015) study on strengthening health systems and structure in low income countries by enhancing organizational capacities and improving institutions in low income countries acknowledged that, world health actors acknowledged significance of supplementing local health facilities in health system strengthening (HSS) operations. The study concurs that in strengthening the health system, there no single approach that suits the diverse health systems that deliver effective health care services expected.

4.12.3 Test of Hypothesis Seven

Organizational structure significantly moderates the relationship between monitoring and evaluation system and provision of curative and preventive tuberculosis health care services in public health institutions in Kisumu County

The aim was to determine the moderating influence of organizational structure on the relationship between monitoring and evaluation systems and provision of curative and preventive tuberculosis health care services in public health institutions. The composite mean of the organizational structure which is moderating were; centralization, flexibility, decentralization and complexity. The computation was done using linear regression model;

$$Y_{7a} = a_{7a} + \beta_{71a} X + \beta_{72a} W + e_{7a}$$

$$Y_{7b} = a_{7b} X + \beta_{72b} X_1 + e_{7b}$$

Where X = Composite score of M&E system

W = Composite score of organizational structure

Where; X_1 = X.W Product term

e_{7a} and e_{7b} are error terms

The study result indicated that P-value 0.00<0.05 at a level of significance at 0.05 and therefore, the null hypothesis was rejected.

CHAPTER FIVE
SUMMARY OF THE FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents summaries of the study findings conclusions, recommendations contributions to the body of knowledge and suggested areas for further studies.

5.2 Summary of Findings

In summary, the study findings are discussed below.

5.2.1 Provision of Curative and Preventive Tuberculosis Health Care Services

The study determine that curative and preventive tuberculosis health care services in public health institutions in Kisumu county, were indeed delivered to the extent that was satisfying to the public. The study confirmed that, there was a lot being done to ensure that the menace of the disease is dealt with effective provision of curative and preventive tuberculosis health care services. The study revealed that the despite of the nature of the disease (tuberculosis), the public health care institutions were able raise up to the occasion to provide the necessary treatment deserved to prevent and to cure the disease. The study on provision of curative and preventive tuberculosis health care services indicators of accessibility, diagnosis, treatment, quality, continuity, person centeredness and vaccination had a composite mean of 3.82 and a standard deviation of 1.231. This therefore implies that there is significant influence of the indicators on provision of curative and preventive tuberculosis health care services in public health institutions. Therefore, the study results on provision of curative and preventive tuberculosis health care services showed that the P-value was 0.005 which was below 0.05 level of significance and therefore the null hypothesis was rejected.

5.2.2 Human Capacity for M&E and Provision of Curative and Preventive Tuberculosis Health Care Services in Public Health Institutions

The monitoring and evaluation system indicator studied of human capacity for M&E were; skilled M&E staff, staff training on M&E, technical ability on M&E, work allocation and M&E experience that were focused on the influence of provision of curative and preventive tuberculosis health care services. The study was determined to establish whether the M&E activities in the public health institutions are conducted by the M&E officers. The study on

human capacity for M&E results had a composite mean of 3.85 and a standard deviation of 0.487 indicating that human capacity for M&E has a significant influence on provision of curative and preventive tuberculosis health care services in public health institutions. Therefore, the study results showed that the P-value was 0.005 which was below 0.05 level of significance and therefore the null hypothesis was rejected.

5.2.3 Logical Framework for M&E and Provision of Curative and Preventive Tuberculosis Health Care Services in Public Health Institutions

Logical framework for M&E as a function of M&E system was observed as essentially important that plays a significant role in ensuring of effective planning and implementation of the health care projects that contribute the realization of the set goals. It also enhances clarity, systematic and also provides program details. The study established that the factors of the indicator which were; indicators choice, knowledge on logical framework, use of logical framework, indicators of the framework and mitigation measures. The results indicated that logical framework had composite mean of 3.94 and a standard deviation of 0.426 implying that it contribute significantly to the realization of the attaining the expected outcome on provision of curative and preventive tuberculosis health care services in public health institutions. This relationship was observed to be statistically significant with the P-value of 0.005 which was below 0.05 level of significance and therefore the null hypothesis was rejected.

5.2.4 M&E Work Plan and Provision of Curative and Preventive Tuberculosis HealthCare Services in Public Health Institutions

The monitoring and evaluation work plan are important in assessing progress of the program towards achieving its goal and objectives. The study revealed that M&E work plan was a significant tool that was used by the M&E officers for comprehensive planning on how to study report on the program and its effect. The study investigated these activities as indicators of monitoring and evaluation work plan in public health institutions; finances for facilitation and implementation, time frame to achieve the work, program sequences as planned and plan review. The study had a composite mean of 3.90 and standard deviation of 0.447 which means that there was a statistical significant influence of monitoring and evaluation work plan on provision of curative and preventive tuberculosis health care

services. Therefore based on the results with the P-value of 0.005 which was below 0.05 level of significance, implies that the null hypothesis was rejected.

5.2.5 Data Dissemination and Use and Provision of Curative and Preventive Tuberculosis Health Care Services in Public Health Institutions

The influence of data dissemination and use on provision of curative and preventive tuberculosis health care services was determined. The activities that were significant to data dissemination and use were; data collection instrument, data source, reliable instrument, data accuracy and data analysis. The study on data dissemination and use results had a composite mean of 3.91 and a standard deviation of 0.466 results indicated that majority of respondents acknowledged that data dissemination and use has significant influence on provision of curative and preventive tuberculosis health care services in public health institutions. Therefore, the study results showed that the P-value was 0.005 which was below 0.05 level of significance and therefore the null hypothesis was rejected.

5.2.6 Combined M&E System and Provision of Curative and Preventive Tuberculosis Health Care Services in Public Health Institutions

It was established that every M&E system activities though varied as but influences provision of curative and preventive tuberculosis health care services in Kisumu County. The study on combined M&E system of human capacity for M&E, logical framework for M&E, M&E work plan and data dissemination and use results had a composite mean of 3.90 and a standard deviation of 0.38 implying that there is significant influence on provision of curative and preventive tuberculosis health care services in public health institutions. The strength of each of the M&E system component relationships was also done using multiple regression analysis and results indicated that there was fundamental on strengthening the health care system to deliver effective curative and preventive tuberculosis health care services to the patients. The correlation (r) and the coefficient determination (R-square), where r = 0.402 implying that combined M&E system have a higher influence on provision of curative and preventive tuberculosis. Therefore, the study results showed that the P-value was 0.005 which was below 0.05 level of significance and therefore the null hypothesis was rejected.

5.2.7 The Intervening Influence of Stakeholder Participation on the relationship between Monitoring and Evaluation System and Provision of Curative and Preventive Tuberculosis Health Care Services in Public Health Institutions

The study investigated the circumstances in which the stakeholder participation was correlated in public health institutions in Kisumu County. To test for the intervening, all the variables involved need to correlate, the stakeholder participation, M&E system and provision of curative and preventive tuberculosis health care services to correlate. The study outcome revealed that monitoring and evaluation system intervened by stakeholder participation are responsible for significant outcome had a composite mean of 4.03 and standard deviation of 0.441 on provision of curative and preventive tuberculosis health care services in public health institutions. The study result indicated that stakeholder participation had a statistically significant influence with P-value was 0.005 which was below 0.05 level of significance and therefore the null hypothesis was rejected.

5.2.8 The Moderating Influence of Organizational Structure on the relationship between Monitoring and Evaluation System Provision of Curative and Preventive Tuberculosis Health Care Services in Public Health Institutions

The study assumption was that M&E system component as moderated by organizational structure improve health care activities that consequently influenced the provision of curative and preventive tuberculosis health care services in public health institutions. The study results on organizational structure had a composite mean of 3.42 and standard deviation of 0.793 implying that organizational structure had an influence on M&E system thus contribute to the provision of curative and preventive tuberculosis health care services. The results therefore, showed that the P-value was 0.005 which was below 0.05 level of significance and therefore the null hypothesis was rejected.

5.3 Conclusions

The human capacity for M&E was found to have significance influence on the provision of curative and preventive tuberculosis health care services. The study revealed that for the effective implementation of health care services, there was need to employ adequate staff in the M&E unit that have the necessary M&E technical know-how and experience. Therefore, this M&E component emphasizes the need to have the necessary human resource that can run the M&E function at the public health institutions to ensure that the M&E capacity of

these employees are continuously developed through training and other capacity building initiatives to ensure that they keep up with current and emerging trends in the field.

The logical framework for the study summarizes, the details that the public health care institutions health care activities to be achieved, input of resources, processes involved and the impact are significant to the effective provision of curative and preventive tuberculosis health care services to the patients. The logical framework further ensure that the potential problems which could affect the success of the project, and how the progress and ultimate success of the project will be measured and verified so that the mitigation measures are put in place. The study found that there was a strong correlation of efficient between logical framework for M&E and provision of curative and preventive tuberculosis health care services.

M&E work plan is essential in health care programs since it elaborate on what the program is intending to achieve, how it is going to implement it and within the specified time. It is therefore important to note that the public health institutions M&E work plan should be inclusive that involve communication, identifying the indicators that are directly related to the health care activities to be carried out to enable the organization to achieve its objectives. The study result found that M&E work plan and provision of curative and preventive tuberculosis health care services had a stronger correlation efficient that contribute to the achievement of the set objectives. The M&E Plan helps assess progress of the program toward achieving its goals and objectives. Thus, the M&E work plan is an important tool used by M&E officers for comprehensive planning on how to study and report on the program and its effects.

The study acknowledges that data dissemination and use played a significant role and technological aspect that is fast becoming integral part in health care activities. The study found that data dissemination and use assist in the early identification of health issues, and provide alerts in situations requiring responses. Therefore, there was a strong correlation between data dissemination and use and provision of curative and preventive tuberculosis health care services. More importantly, dissemination of data provides added value to research projects, as the impact of research can be potentially wider than the initial focus.

Dissemination of data promotes the profile of not only the researchers but also the organizations strength capacity in research.

The health care institutions are professional globally with the ability to employ the use of rigorous processes to ensure that health care recommendations are informed by the best available research evidence with input from appropriate stakeholders. The study acknowledged that there was a strong correlation between stakeholder participation and provision of curative and preventive tuberculosis health care services. Stakeholder involved was confirmed to be vital in ensuring that, planning, decision making, control and balances are adhered to the required standards. Stakeholder involvement leads to a better process that contributes to the effective provision of the needed curative and preventive tuberculosis health care services that satisfy the public.

Health care organizations are complex in nature and therefore it management is a profession that provides leadership and direction that ensure that delivery of health services are the top priority. The study confirms that there was relationship between organizational structure, M&E system provision of curative and preventive tuberculosis health care services. The nature of organizations requires that managers provide leadership, as well as the supervision and coordination of staff. Healthcare institutions are tasked with the provision of the necessary tasks in producing services to the public that require the coordination of many highly specialized disciplines that must work together seamlessly in order to achieve the intended objectives.

5.4 Recommendations

The study results contribute to the following recommendations.

5.4.1 Recommendation for Practice

1. The study recommends for the integration of M&E system on the improvement on overall status of health in Kenya in line with the constitution of Kenya 2010.
2. The commitment of the health sectors under the different levels of government responsibility to ensure that the country attains the highest possible standards of health in a manner responsible to the needs of the population.

3. To take account of the functional responsibilities between the county and the national government in terms of their respective accountability and management lines to ensure effective provision of health care services.
4. M&E system should be embraced as it proposes a comprehensive and innovative approach to harness and synergize health services delivery at all levels and engaging all actors hence accountability to achieve the results.
5. M&E system diversity can be used in other sectors of the economy such as production, manufacturing and processing because of its significant impact it can contribute to the economy.

5.5 Suggestions for Further Studies

The other studies that can be carried out are as follows:

1. Monitoring maternal health care, seeking behavior and pregnancy outcome in public health institutions.
2. The influence of M&E system in manufacturing, production and delivery of goods and services in Kenyan economy.
3. The study on evaluation of health information systems, problems and challenges on the preference of health care services in national public health institution and measuring of primary health care system performance using a shared monitory system in County level five hospitals.
4. The need to carry out an independent study to establish the influence of other M&E system intervened by other variables on performance of public health institution in delivery of health care services.

5.6 Contribution to the Body of Knowledge

The study contribution to the body of knowledge are presented in Table 5.1.

Table 5.1: Contribution to the Body of Knowledge

Objectives	Contribution to Knowledge
1. To establish how human capacity for monitoring and evaluation influence provision of curative and preventive tuberculosis health care services in public health institutions in Kisumu county.	1. Human capacity for M&E relate to other findings contribute significantly to the provision of curative and preventive tuberculosis health care services however, there are faced with challenges where the human resources lack M&E requisite skills that is useful in the implementation of the relevant activities hence creates the barrier in discharging curative and preventive tuberculosis health care services to the tuberculosis patients as required. The human resources for monitoring and evaluation are important in assuring the health care activities carried out with utmost concern and effective delivery of curative and preventive tuberculosis health care services are achieved. Therefore, there is need to find a way in which human capacity for M&E are trained to the required standards with adequate capacity and integrated in health care system to enhance provision of curative and preventive tuberculosis health care services in health institutions. Human capacity for M&E as the human resources equipped with the skills needed

	that can be applied in the undertaking of the developing programs of the monitoring and evaluation. Therefore, it is necessary for the public health institutions to ensure that the have a well-trained and skilled staff with the systems that can handle the variety of M&E tools in health care system that leads to the contribution on effective provision of curative and preventive health care services to patients.
2. To determine how logical framework influence provision of curative and preventive detailed information that help tuberculosis health care services in public health institutions in Kisumu County.	2. The logical framework entails the management of public health institutions in planning on how to undertake various activities that empower the public health institutions in the realization of achieving the intended objectives.
3. To assess how monitoring and evaluation work planinfluence provision of curative and preventive tuberculosis health care services in public health institutions in Kisumu County.	3. The M&E work plan is significant tool that contribute immensely by M&E officers for comprehensive planning on how to study and report on the program and its effects. The M&E work plan should be embraced implementing projects as it helps in assessing programs toward achieving its intended objectives.

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APPENDICES

APPENDIX I: LETTER OF CONSENT

John Odhiambo Oluoch
P.O BOX 30197 - 00100
Tel: 0722 221 570
NAIROBI
johnoch75@gmail.com
25th June, 2018

Dear Respondent,

RE: REQUEST TO CARRY OUT RESEARCH

I am a PhD postgraduate student at the University of Nairobi, specializing in project planning and management, project in monitoring and evaluation option. I am conducting a research on the influence of monitoring and evaluation system, stakeholder participation, organizational structure and provision of curative and preventive tuberculosis health care services in public health institutions; the case of Kisumu County, Kenya.

Your organization has been selected to participate in this research. I kindly request for your authorization to allow me collect data from the selected employees more so, to request for your time for an interview and as well as access M&E system, facilities, reports and the department concerned for M&E.

The information sought will be for the purpose of the research and would not be used contrary. Therefore, your responses will be treated in a confidential manner.

Thank you in advance.
Yours faithfully,

JOHN O. OLUOCH
PHD CANDITATE
UON

APPENDIX II: QUESTIONNAIRE FOR PUBLIC HEALTH INSTITUTIONS OFFICERS

The study questionnaire is seeking for information meant for the academic purposes from: Medical officers, Nurse, M&E officers and Clinical Officers will not be used to victimize anyone. Your responses will be treated as confidential and therefore, no name is required. Kindly answer correctly following instruction from each question.

SECTION A: GENERAL INFORMATION ABOUT RESPONDENTS

1. Please fill in the information and tick appropriately in the box

1. Indicate your gender

   a) Female ☐ (b) Male ☐

2. Indicate the level of your highest academic qualification.

   i. Diploma ☐ (c) Masters ☐

   ii. First Degree ☐ (d) PhD ☐

3. What is your age bracket?

   i. Below 25 years ☐ (d) Between 46 - 55 years ☐

   ii. Between 26 – 35 years ☐ (e) Above 55 years ☐

   iii. Between 36- 45 years ☐

4. Indicate your appropriate job category you belong by ticking appropriate box.

   i. Medical officer ☐

   ii. M&E officer ☐

   iii. Clinical officer ☐

   iv. Nurse ☐

SECTION B. PROVISION OF CURATIVE AND PREVENTIVE TUBERCULOSIS HEALTH CARE SERVICES

5. Competent health provision is very important essential aspect in all institutions providing health care services. The health care system should have the capacity to meet the required standards that satisfy the population. Health organizations vary from one state to the other but, effective health system structure ought to possess specific indicators. Indicators in public health institutions to the target population on provision of curative and preventive tuberculosis health care services. Indicate your opinion on the level of agreement in Likert scale of 1-5. (Where 1= strongly disagree, 2= Disagree, 3= Neutral, 4= Agree, 5= strongly agree).

Statements	Responses				
	1	2	3	4	5
I. Accessibility					
a) The TB health care services offered by the institution are directly accessible without a barrier of cost or language.					
b) TB patients face economic constraints for the health care services to access the treatment.					
c) Any referred TB patients has direct access to TB health care services.					
d) The public awareness on how to access TB health care services at the public health institution.					
e) The TB patients are assured to access to the drugs during and after the initial treatment.					
II. Diagnosis					
a) The TB delay and untimely diagnosis contribute to ineffective treatment for the patients.					
b) The TB patients seeking health care services must be diagnosed before treatment.					
c) The institution encourages mandatory diagnosis for the referred patients before treatment.					

d)	Diagnosed TB patients on treatment are enlightened on the measures to observe during the treatment.					
e)	Upon the diagnosis, the patients are immediately put under treatment and surveillance.					
III.	**Treatment**					
a)	Tuberculosis treatment is effectively offered in the institution that meets the patient's needs.					
b)	The majority of TB patients delay to seek treatment due to limited knowledge of the disease.					
c)	The suspected TB patients are subjected to immediate treatment to avoid the spread of the disease.					
d)	There are positive results recorded in the treatment of the disease.					
e)	TB treatment is advised to any suspected individual as an effort towards wipe out the disease.					
IV.	**Quality**					
a)	The curative and preventive tuberculosis health care services quality satisfy the patients.					
b)	The TB infection is due to lack of proper health care service towards the disease.					
c)	In adequacy for curative health care services offered makes the TB persistent.					
d)	The TB health care services vary from one institution to another hence influences the patient's choice to seek services.					
V.	**Continuity**					
a)	The institution offers after treatment care to check on the progress of the patients.					
b)	The TB patients are put under surveillance while on drugs to ensure compliance.					
c)	There are positive results of TB patient's recovery under observation.					

VI. Person Centeredness					
i. The health care services offered to users are perceived to be responsive and acceptable to them.					
ii. The treatment for TB is focused on the disease rather than the patient.					
d) The TB patients are hopeful to get well once on treatment.					
e) Health care services provided guarantees positive responsiveness that hastens quick recovery.					
VII. Vaccination					
The health care services offers vaccine to those who are perceived to be affected.					
The vaccines are provided annually to curb the spread of the disease.					
The TB free individual has a high probability not to be affected.					
The administering of vaccine has significantly leads decrease of TB patients.					

SECTION C: HUMAN CAPACITY FOR MONITORING AND EVALUATION

6. Below are statements on human capacity for monitoring and evaluation on provision of curative and preventive tuberculosis health care services. Indicate appropriately your level of agreement or disagreement with the statements in Likert scale of 1-5. (Where 1= strongly agree, 2= disagree, 3= neutral, 4= agree, 5= strongly agree).

Statements	**Responses**				
	1	**2**	**3**	**4**	**5**
a) There is adequate M&E staff capacity for curative and preventive tuberculosis health care services.					
b) Staff training on M&E has positive results in the implementation of curative and preventive tuberculosis health care activities.					

c) The institutional staff has the technical ability to integrate M&E in curative and preventive tuberculosis health care programs.					
d) The organizational staff on M&E is trained on what is expected in order to deliver all the work needed within a specific time.					
v. Effective work environment that assures achievement of the set goals					

7. What are the challenges experienced in employing the use M&E?

i. ……..

ii. ……..

iii. ……..

SECTION D: LOGICAL FRAMEWORK FOR MONITORING AND EVALUATION

8. Statements on logical framework for M&E on provision of curative and preventive tuberculosis health care services. Tick appropriately on the level of agreement or disagreement in the Likert scale of 1-5. (Where 1= strongly disagree, 2= Disagree, 3= Neutral, 4= Agree, 5= strongly agree).

Statements	**Responses**				
	1	**2**	**3**	**4**	**5**
a) Indicators of logical framework for M&E are used in implementation of curative and preventive tuberculosis health care programs.					
b) The institution applies the use of logical framework in assessing curative and preventive tuberculosis health care activities.					
c) Planning on the use of logical framework enhances accountability in delivery of tuberculosis health care services.					

d) The use logical framework indicators to monitor the progress in provision of curative and preventive health care activities.					
e) The tool has an impact on the provision of curative and preventive tuberculosis health care services					
f) Mitigation measures are in place in alignment with the objectives.					

SECTION E: MONITORING AND EVALUATION WORK PLAN

9. Some activities that considered in M&E work plan for effective provision of curative and preventive tuberculosis healthcare services to the public. Indicate your level of agreement or disagreement with the statements in Likert scale of 1-5. (Where 1= strongly disagree, 2= disagree, 3= neutral 4= agree, 5= strongly agree).

Statements	**Responses**				
	1	**2**	**3**	**4**	**5**
a) Finances availability for facilitation and implementation affect the curative and preventive tuberculosis health care activities.					
b) Tuberculosis curative and preventive health care activities are completed within the stipulated time frame to help achieve institutional set objectives.					
c) Tuberculosis health care programs are geared towards the institutional plan.					
d) Health care activities progress is reviewed accordance to the Plan.					
e) Works are scheduled based on the health care activities to be undertaken.					

SECTION F: DATA DISSEMINATION AND USE

10. Data dissemination and use in public health institutions, based on your opinion account on the level of agreement or disagreement with the statements in Likert scale of 1-5. (Where 1= strongly disagree, 2= disagree, 3= neutral, 4= agree, 5= strongly agree).

Statements	Responses				
	1	2	3	4	5
i. The institution has developed data collection system for curative and preventive tuberculosis health care activities.					
ii. The Data source for are defined by the institutions objectives of the program concerned.					
iii. The institution is concerned with the reliability of data collection instruments					
iv. Data accuracy is significant to the institutions decision making.					
v. The analyzed data are utilized for planning on provision of curative and preventive tuberculosis health care program activities					

11. What are the challenges the institution experience when processing data?

i. ……

ii. ……

iii. ……

iv. ……

SECTION G: STAKEHOLDER PARTICIPATION

12. Stakeholder participation intervenes the prospects of the public health institutions to its purpose. Below are statements on the activities involved, indicate your level of agreement or disagreement with the statements in Likert scale of 1-5. (Where 1= strongly agree, 2= disagree, 3= neutral, 4= agree 5= strongly agree).

Statements	Responses				
	1	**2**	**3**	**4**	**5**
a) Public health institutional decision making is based on set objectives.					
b) The health institutional management support planning that is focused on the achievement of its objectives.					
c) The institution empowers its staff to achieve significant impact in the implementation of the curative and preventive tuberculosis health program activities.					
d) The institutional consult on M&E values in implementing the health programs.					

13. What are the categories of the stakeholder's involvement in the implementation of the curative and preventive tuberculosis activities in the institution?

i. .....

ii. ……..

iii. ……..

iv. ……..

SECTION H: ORGANIZATIONAL STRUCTURE

14. Organizational structure focus to moderate public health institution to achieve its objectives. Below are statements that indicate the impact to health care activities. Indicate your level of agreement or disagreement with the statements in Likert scale of 1-5. (Where 1= strongly disagree, 2= disagree, 3= neutral, 4= agree, 5= strongly agree).

Statements	Responses				
	1	**2**	**3**	**4**	**5**
a) The centralized format allows for the confinement of delivery of health care services to the closely residents.					
b) Flexibility of the institution allows people to work and accomplish what are expected of them.					
c) The institutional decentralized system leads to more effective decision making.					
d) The complex nature resulted in emergency preparedness to ensure the achievement of set objectives.					

APPENDIX III: INTERVIEW SCHEDULE FOR TUBERCULOSIS PATIENTS IN PUBLIC HEALTH INSTITUTIONS

SECTION B: 1

SECTION A: GENERAL INFORMATION ABOUT RESPONDENTS

1. Please fill in the information and tick appropriately in the box

1. Indicate your gender

(a) Female ☐ (b) Male ☐

2. Indicate the level of your highest academic qualification.

(a) Diploma ☐ (b) First Degree ☐

(c) Masters ☐ (d) PhD ☐

3. What is your age bracket?

(a) Below 25 years ☐ (d) Between 46 - 55 years ☐

(b) Between 26 – 35 years ☐ (e) Above 55 years ☐

(c) Between 36- 45 years ☐

SECTION B. PROVISION OF CURATIVE AND PREVENTIVE TUBERCULOSIS HEALTH CARE SERVICES

4. Competent health provision is very important essential aspect in all institutions providing health care services. The health care system should have the capacity to meet the required standards that satisfy the population. Health organizations vary from one state to the other but, effective health system structure ought to possess specific indicators. Indicators in public health institutions to the target population on provision of curative and preventive tuberculosis health care services. Indicate your opinion on the level of agreement in Likert scale of 1-5. (Where 1= strongly disagree, 2= Disagree, 3= Neutral, 4= Agree, 5= strongly agree).

Statements	**Responses**				
	1	**2**	**3**	**4**	**5**
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c) Any referred TB patients has direct access to TB health care services.					
d) The public awareness on how to access TB health care services at the public health institution.					
e) The TB patients are assured to access to the drugs during and after the initial treatment.					
II. Diagnosis					
a) The TB delay and untimely diagnosis contribute to ineffective treatment for the patients.					
b) The TB patients seeking health care services must be diagnosed before treatment.					
c) The institution encourages mandatory diagnosis for the referred patients before treatment.					
d) Diagnosed TB patients on treatment are enlightened on the measures to observe during the treatment.					

e) Upon the diagnosis, the patients are immediately put under treatment and surveillance.						
III. Treatment						
a) Tuberculosis treatment is effectively offered in the institution that meets the patient's needs.						
b) The majority of TB patients delay to seek treatment due to limited knowledge of the disease.						
c) The suspected TB patients are subjected to immediate treatment to avoid the spread of the disease.						
d) There are positive results recorded in the treatment of the disease.						
e) TB treatment is advised to any suspected individual as an effort towards wipe out the disease.						
IV. Quality						
a) The curative and preventive tuberculosis health care services quality satisfy the patients.						
b) The TB infection is due to lack of proper health care service towards the disease.						
c) In adequacy for curative health care services offered makes the TB persistent.						
d) The TB health care services vary from one institution to another hence influences the patient's choice to seek services.						
V. Continuity						
a) The institution offers after treatment care to check on the progress of the patients.						
b) The TB patients are put under surveillance while on drugs to ensure compliance.						
c) There are positive results of TB patient's recovery under observation.						
VI. Person Centeredness						
a) The health care services offered to users are perceived to be responsive and acceptable to them.						

b) The treatment for TB is focused on the disease rather than the patient.						
c) The TB patients are hopeful to get well once on treatment.						
d) Health care services provided guarantees positive responsiveness that hastens quick recovery.						
VII. Vaccination						
a) The health care services offers vaccine to those who are perceived to be affected.						
b) The vaccines are provided annually to curb the spread of the disease.						
c) The TB free individual has a high probability not to be affected.						
d) The administering of vaccine has significantly leads decrease of TB patients.						

SECTION C: HUMAN CAPACITY FOR MONITORING AND EVALUATION

5. Below are statements on human capacity for monitoring and evaluation on provision of curative and preventive tuberculosis health care services. Indicate appropriately your level of agreement or disagreement with the statements in Likert scale of 1-5. (Where 1= strongly agree, 2= disagree, 3= neutral, 4= agree, 5= strongly agree).

Statements	Responses				
	1	2	3	4	5
a) There is adequate M&E staff capacity for curative and preventive tuberculosis health care services.					
b) Staff training on M&E has positive results in the implementation of curative and preventive tuberculosis health care activities.					
c) The institutional staff has the technical ability to integrate M&E in curative and preventive tuberculosis health care programs.					
d) The organizational staff on M&E is trained on what is expected in order to deliver all the work needed within a specific time.					
e) Effective environment that assures achievement of the set goals					

6. What are the challenges experienced in employing the use M&E?
   i) ……..
   ii) ……..
   iii) ……..
   iv) ……..

SECTION D: LOGICAL FRAMEWORK FOR MONITORING AND EVALUATION

7. Statements on logical framework for M&E on provision of curative and preventive tuberculosis health care services. Tick appropriately on the level of agreement or disagreement in the Likert scale of 1-5. (Where 1= strongly disagree, 2= Disagree, 3= Neutral, 4= Agree, 5= strongly agree).

Statements	Responses				
	1	2	3	4	5
a) Indicators of logical framework for M&E are used in implementation of curative and preventive tuberculosis health care programs.					
b) The institution applies the use of logical framework in assessing curative and preventive tuberculosis health care activities.					
c) Planning on the use of logical framework enhances accountability in delivery of tuberculosis health care services.					
d) The use logical framework indicators to monitor the progress in provision of curative and preventive health care activities.					
e) The tool has an impact on the provision of curative and preventive tuberculosis health care services					
f) Mitigation measures are in place in alignment with the objectives.					

SECTION E: MONITORING AND EVALUATION WORK PLAN

8. Some activities that considered in M&E work plan for effective provision of curative and preventive tuberculosis healthcare services to the public. Indicate your level of agreement or disagreement with the statements in Likert scale of 1-5. (Where 1= strongly disagree, 2= disagree, 3= neutral 4= agree, 5= strongly agree).

Statements	Responses				
	1	2	3	4	5
a) Finances availability for facilitation and implementation affect the curative and preventive tuberculosis health care activities.					
b) Tuberculosis curative and preventive health care activities are completed within the stipulated time frame to help achieve institutional set objectives.					

c) Tuberculosis health care programs are geared towards the institutional plan.					
d) Health care activities progress is reviewed accordance to the Plan.					
e) Works are scheduled based on the health care activities to be undertaken.					

SECTION F: DATA DISSEMINATION AND USE

9. Data dissemination and use in public health institutions, based on your opinion account on the level of agreement or disagreement with the statements in Likert scale of 1-5. (Where 1= strongly disagree, 2= disagree, 3= neutral, 4= agree, 5= strongly agree).

Statements	**Responses**				
	1	**2**	**3**	**4**	**5**
a) The institution has developed data collection system for curative and preventive tuberculosis health care activities.					
b) The Data source for are defined by the institutions objectives of the program concerned.					
c) The institution is concerned with the reliability of data collection instruments					
d) Data accuracy is significant to the institutions decision making.					
e) The analyzed data are utilized for planning on provision of curative and preventive tuberculosis health care program activities					

10. What are the challenges the institution experience when processing data?
    i) ……
    ii) ……
    iii) ……
    iv) ……

SECTION G: STAKEHOLDER PARTICIPATION

11. Stakeholder participation intervenes the prospects of the public health institutions to its purpose. Below are statements on the activities involved, indicate your level of agreement or disagreement with the statements in Likert scale of 1-5. (Where 1= strongly agree, 2= disagree, 3= neutral, 4= agree 5= strongly agree).

Statements	Responses				
	1	**2**	**3**	**4**	**5**
a) Public health institutional decision making is based on set objectives.					
b) The health institutional management support planning that is focused on the achievement of its objectives.					
c) The institution empowers its staff to achieve significant impact in the implementation of the curative and preventive tuberculosis health program activities.					
d) The institutional consult on M&E values in implementing the health programs.					

12. What are the categories of the stakeholder's involvement in the implementation of the curative and preventive tuberculosis activities in the institution?

i) .....

ii) ……..

iii) …….

SECTION H: ORGANIZATIONAL STRUCTURE

13. Organizational structure focus to moderate public health institution to achieve its objectives. Below are statements that indicate the impact to health care activities. Indicate your level of agreement or disagreement with the statements in Likert scale of 1-5. (Where 1= strongly disagree, 2= disagree, 3= neutral, 4= agree, 5= strongly agree).

Statements	Responses				
	1	**2**	**3**	**4**	**5**
a) The centralized format allows for the confinement of delivery of health care services to the closely residents.					
b) Flexibility of the institution allows people to work and accomplish what are expected of them.					
c) The institutional decentralized system leads to more effective decision making.					
d) The complex nature resulted in emergency preparedness to ensure the achievement of set objectives.					

APPENDIX IV: DATA CHECK LIST

Type of Secondary Materials	Number
M&E reports	
M&E plans	
Patients records	

Themes to look for in the Data Check List

Category	**No.**	**Linkage to M&E activities**	**Linkage to provision of curative and preventive tuberculosis health care services**
Human Capacity Indicators			
Skilled M&E staff			
Staff training on M&E			
Technical ability on M&E			
Effective work allocation			
M&E experience			
Logical Framework			
Indicators choice			
Knowledge on logical framework			
Use of logical framework			
Indicators of the logical framework			
Mitigation measures			
M&E Work Plan			
Finances for facilitation and implementation			
Time frame to achieve the work planned			
Plan review			
Work schedule			
Data Dissemination and Use			

Developed data collection system			
Source of data			
Reliability of instrument			
Data accuracy significant			
Data analysis			
Stakeholder Participation			
Decision making			
Planning			
Empower			
Consultancy			
Organizational Structure			
Centralized			
Flexible			
Decentralized			
Complex			

APPENDIX V: LIST OF THE SUB COUNTY PUBLIC HEALTH INSTITUTIONS THAT PARTICIPATED IN THE STUDY

1. Ahero Sub County Hospital
2. Chulaimbo Sub County Hospital
3. Kombewa Sub County Hospital
4. Nyando Sub County Hospital

APPENDIX VI: KRECIE AND MORGAN TABLE

N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	265	3000	341
20	19	120	92	300	169	900	269	3500	246
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	351
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	181	1200	291	6000	361
45	40	180	118	400	196	1300	297	7000	364
50	44	190	123	420	201	1400	302	8000	367
55	48	200	127	440	205	1500	306	9000	368
60	52	210	132	460	210	1600	310	10000	373
65	56	220	136	480	214	1700	313	15000	375
70	59	230	140	500	217	1800	317	20000	377
75	63	240	144	550	225	1900	320	30000	379
80	66	250	148	600	234	2000	322	40000	380
85	70	260	152	650	242	2200	327	50000	381
90	73	270	155	700	248	2400	331	75000	382
95	76	270	159	750	256	2600	335	100000	384

Source: Krejcie, Robert V., Morgan, Daryle W., "Determining Sample Size for Research Activities", Educational and Psychological Measurement, 1970.

APPENDIX VII: RESEARCH PERMIT

NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

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NACOSTI, Upper Kabete
Off Waiyaki Way
P.O. Box 30623-00100
NAIROBI-KENYA

Ref. No. **NACOSTI/P/18/44805/24469**

Date: **18th August, 2018**

John Odhiambo Oluoch
University of Nairobi
P.O. Box 30197-00100
NAIROBI.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on ***"Monitoring and Evaluation system stakeholder participation organizational structure and provision of curative and preventive tuberculosis health care services in public health institutions: The case of Kisumu County Kenya,"*** I am pleased to inform you that you have been authorized to undertake research in **Kisumu County** for the period ending **17th August, 2019.**

You are advised to report to **the County Commissioner, the County Director of Education and the County Director of Health Services, Kisumu County** before embarking on the research project.

Kindly note that, as an applicant who has been licensed under the Science, Technology and Innovation Act, 2013 to conduct research in Kenya, you shall deposit **a copy** of the final research report to the Commission within **one year** of completion. The soft copy of the same should be submitted through the Online Research Information System.

GODFREY P. KALERWA MSc., MBA, MKIM
FOR: DIRECTOR-GENERAL/CEO

Copy to:

The County Commissioner
Kisumu County.

The County Director of Education
Kisumu County.

The County Director of Health Services
Kisumu County.

THIS IS TO CERTIFY THAT:
MR. JOHN ODHIAMBO OLUOCH
of UNIVERSITY OF NAIROBI, 30197-100 NAIROBI,has been permitted to conduct research in *Kisumu County*

on the topic: *MONITORING AND EVALUATION SYSTEM STAKEHOLDER PARTICIPATION ORGANIZATIONAL STRUCTURE AND PROVISION OF CURATIVE AND PREVENTIVE TUBERCULOSIS HEALTH CARE SERVICES IN PUBLIC HEALTH INSTITUTIONS:THE CASE OF KISUMU COUNTY KENYA*

for the period ending:
17th August,2019

Permit No : NACOSTI/P/18/44805/24469
Date Of Issue : 18th August,2018
Fee Recieved :Ksh 2000

.....
Applicant's Signature

.....
Director General
National Commission for Science, Technology & Innovation

CONDITIONS

1. **The License is valid for the proposed research, research site specified period.**
2. **Both the Licence and any rights thereunder are non-transferable.**
3. **Upon request of the Commission, the Licensee shall submit a progress report.**
4. **The Licensee shall report to the County Director of Education and County Governor in the area of research before commencement of the research.**
5. **Excavation, filming and collection of specimens are subject to further permissions from relevant Government agencies.**
6. **This Licence does not give authority to transfer research materials.**
7. **The Licensee shall submit two (2) hard copies and upload a soft copy of their final report.**
8. **The Commission reserves the right to modify the conditions of this Licence including its cancellation without prior notice.**

REPUBLIC OF KENYA

National Commission for Science Technology and Innovation

RESEARCH CLEARANCE PERMIT

Serial No.A 20125

CONDITIONS: see back page