

**EFFECTIVENESS OF QUALITY HEALTH CARE STRATEGIES IN  
IMPROVING SERVICE DELIVERY AT THE NATIONAL  
REFERRAL HOSPITALS IN KENYA**

**DOUGLAS ODHIAMBO OWINO**

**A MANAGEMENT RESEARCH PROJECT SUBMITTED IN  
PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE  
AWARD OF THE DEGREE OF MASTER OF BUSINESS  
ADMINISTRATION (MBA), SCHOOL OF BUSINESS, UNIVERSITY  
OF NAIROBI**

**OCTOBER 2014**

## **DECLARATION**

This management research project is my original work and it has not been submitted for an award of any degree at any University.

**Signature..... Date.....**

**Name: Douglas O. Owino  
Reg. No. D61/66652/2010**

## **SUPERVISOR'S APPROVAL**

I confirm that this management research project has been submitted for review with my approval as the University Supervisor.

**Supervisor's Signature..... Date.....**

**Dr. Mary Kinoti**

**Department of Business Administration**

**School of Business**

**University of Nairobi**

## **DEDICATION**

This research project is dedicated to members of my entire family who are among many Kenyans faced with the challenge of accessing quality treatment and care in various hospitals. Special dedication to my dear wife, Alice Getrude Atieno Okonya, my daughters Stephie Sarah Kenyagah and Lovelle Josephine Akinyi, my son, Douglas Booker Owino Jnr, my mother, Sarah Kenyagah, and my late father, Booker Owino Ojero.

I also dedicate this research to all deserving cases who are unable to access specialised quality healthcare and those who may have died due to preventable causes and/or diseases.

## **ACKNOWLEDGEMENTS**

First and foremost, I thank the almighty God for his continued grace, guidance, protection and direction throughout my studies. I wish to acknowledge the following: My supervisor, Dr. Mary Kinoti, for her professional guidance and quality supervision that has enabled me to complete this research project.

I also thank my moderator, Dr. James Gathungu, for his valuable comments on the research proposal and Prof. A.N. Guantai, Chairperson, KNH/UoN Ethics Review Committee for her valuable comments and approval to collect data at Kenyatta National Hospital.

My gratitude goes to Dr. W. Aruasa, Deputy Director and Chairman, MTRH Institutional Research and Ethics Committee, for approving my request to collect data at Moi Teaching and Referral Hospital. Mr. Josephat Rotich, the Human Resource Manager, Uasin Gishu County, for his support and facilitating data collection at MTRH.

Rahab Asira, the Secretary, Risk and Quality Assurance Department and Mr. Dickson Kimeu Muia, Senior Administrative Officer, Prime Care, both of Kenyatta National Hospital for facilitating data collection.

## ABSTRACT

This study investigated the effectiveness of quality health care strategies in improving service delivery at the national referral hospitals in Kenya. National referral refers to any process in which healthcare providers at lower levels of the health system seek the assistance of providers who are better equipped or specially trained to guide them in managing or to take over responsibility for a particular episode of a clinical condition in a patient. The population of this study comprised two national referral hospitals in Kenya, namely Kenyatta National Hospital and Moi Teaching and Referral Hospital which have a total of 96 departments and units. Due to small sample, a census survey was conducted at the two national referral hospitals. A total of 96 questionnaires were administered and 67 were completed and returned, which represented 69.8 per cent response rate. Qualitative data analysis was done using one-tailed test to establish regression coefficient at 95% confidence interval and qualitative data was subjected to content analysis. The study findings revealed that healthcare strategies have a positive effect on service quality at the national referral hospitals, although the strategies had varying degrees of association with service delivery systems, processes and outcomes. Adoption of ICT applications had a greater impact on follow-up systems compared to other strategic interventions. Strategic Leadership Training, Results Based Financing (RBF), and specific strategic interventions at the departmental level had a high significant effect in improving service quality outcomes such as rate of re-admission, average mortality rate, time taken to serve clients and average waiting time to be served. Quality improvement initiatives by some departments to reduce rates of infection indicated a slightly significant relationship compared to other interventions. Quality healthcare strategies adopted by the hospitals also had a very significant relationship with average length of in-patient stay. The level of client satisfaction showed a greater significant relationship with the adoption of ICT and specific strategic interventions by the departments to improve service quality. The findings also showed that vision, mission, strategic plan, service delivery charter, human resources and physical facilities were critical drivers in the implementation of quality healthcare strategies in the two hospitals. Clearly, this demonstrates that quality improvement strategies at the hospitals require a multifaceted approach and adoption of appropriate model for implementation of the strategies. The study recommends adoption of integrated approach to Quality Improvement Programs (QIPs) and increased uptake of ICT innovations to enhance turnaround time. The hospitals' management should encourage other service delivery innovations at the functional units which are appropriate to various departments to complement institutional-driven programmes. Institutionalisation of training programmes on attitude change is required for successful implementation of various strategic interventions since staff attitude is one of the biggest impediments to implementation of QIPs. It is prudent to adopt an ideal model for implementation of quality healthcare strategies to optimise service quality and clinical outcomes. The study also recommends incorporation of QIPs in the core-curriculum for healthcare workers. Further study should be conducted on specific strategic interventions that can be used to optimise quality of healthcare services and clinical outcomes in public hospitals in Kenya.

**Key words: Effectiveness, quality, healthcare, service delivery, referral hospitals, quality management systems**

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## **ABBREVIATIONS**

AHA- American Heart Association

GoK- Government of Kenya

IOM- Institute of Medicine

ISO- International Organisation for Standardisation

KNH-Kenyatta National Hospital

MoH-Ministry of Health

MTRH- Moi Teaching and Referral Hospital

NICHM- North Carolina Institute of Public Health

QIPs-Quality Improvement Programs

USA- United States of America

WHO- World Health Organisation

## DEFINITION OF TERMS

**Clinical:** refers to observation and treatment of patients.

**Quality:** is the degree to which health services for individuals and populations increase the likelihood of desired health outcomes.

**Quality Audits:** refers to systematic, independent and documented process for obtaining audit evidence and evaluating it objectively to determine compliance with the quality management systems and standards, and hospital's documented procedures.

**Quality Circles:** refers to various teams formed at different levels organisation to ensure effective implementation and monitoring of Quality Improvement Programmes.

**Referral:** refers to any process in which healthcare providers at lower levels of the health system seek the assistance of providers who are better equipped or specially trained to manage a clinical condition in a patient.

# CHAPTER ONE: INTRODUCTION

## 1.1 Background of the study

Health provision varies around the world and almost all wealthy nations provide universal healthcare except USA (Shah, 2011). According to World Health Organisation (2003), indicators on ranking of the overall performance of national health systems and quality of healthcare varies from country to county. Over the past 10 years, comparative assessment of the performance of healthcare systems within and between countries has received growing interest, and several countries have developed conceptual frameworks for monitoring and assessing the performance of their health systems to improve quality of care (RAND, 2010). Health provision is challenging due to the costs required as well as various social, cultural, political and economic conditions (Shah, 2011). Comparability of cross-national data is also a challenge and there is effort to develop and validate quality indicators that can be used internationally (RAND, 2010).

The ranking of various countries by WHO (2003) indicated that France provided the best overall healthcare, followed by Italy, Spain, Oman, Austria and Japan, and that the USA health systems consume a higher portion of her gross domestic product compared to other countries. Some global issues that impact healthcare include outsourcing of medical services, acquisition and consolidation in the pharmaceutical industry, movement of health professional labour across national borders, medical tourism, and competition for international patients (Ramirez, 2013). Thus, global consensus now calls for a holistic approach to health that emphasises social well-being and mental health alongside physical health (ISO, 2013).

The Kenya's healthcare provision and implementation infrastructure includes the national referral and teaching hospitals, provincial, district and sub-district hospitals, health centres, and public dispensaries (Wamai, 2009). Health services are provided through a network of over 4,700 health facilities countrywide, with the public sector system accounting for about 51 per cent of these facilities (GoK, 2005). Some barriers to entry in the Kenyan health system are cost and access to suitable care (Turin, 2010). However, utilisation of health services is a key factor in improving health outcomes for Kenyans in both the short and long term (Turin, 2010). Therefore, the rationale for measuring quality healthcare strategies is to establish the link between good performance and good quality practice, although the success of healthcare strategies depends to some extent on the capacity of the implementing health institutions (GoK, 2010).

### **1.1.1 Concept of Strategy**

Strategy is about long term direction of an organisation and it is typically thought of in terms of major decisions about the future (Whittington, 1993). According to Mintzberg, et al. (1999) strategy is the pattern or plan that integrates an organization's major goals, policies and action sequence into a cohesive whole and include goals and objectives as part of strategy while others make firm distinction of the two. Strategy and tactics are different, and the primary difference lies in the scale of action or the perspective of the leader (Thompson et al, 007). Further, Thompson et al. (2007) posited that tactics can occur at either level and are short-duration, adaptive, action-interaction realignments, which opposing forces use to accomplish limited goals after their initial contact. They

also observed that strategy defines a continuing basis for ordering these adaptations towards more broadly conceived purposes.

The organisation's strategy is a management's action plan for running the business and conducting operations (Johnson et al, 2005). The best indicators of an organisation's strategy are its actions in the marketplace and the statements of senior managers about the company's current business approaches, future plans, and efforts to strengthen its competitiveness and performance (Johnson et al, 2005). The essence of strategy is in the activities by choosing to perform activities differently or to perform different activities than rivals (Porter, 1996). To avoid strategic failure, organisations have recognised that risk management and crisis management is critical in strategic planning (Porter, 1985). The determination of long-term goals and objectives of an organisation serves as a framework within which choices are made concerning the nature and direction of the organisation and is critical to strategic management (Stoney, 2001). This framework helps in the allocation of resources to enhance financial and strategic performance.

Strategy places emphasis on resource allocation and plans throughout the entire organisation and is concerned with complexity arising out of ambiguous and non-routine situations with organisation-wide rather than operation specific implications (Dincer et al, 2006; Scholes & Whittington, 2008). A strategist plays a critical role to understand and cope with the competition, and is essential to effective strategic positioning, defending the organisation against the competitors and shaping it to respond future challenges (Porter, 2008). Porter's model identified the five forces that shape industry competition as

the threat on new entrants, bargaining power of buyers, bargaining power of suppliers, threat of substitute products or services and rivalry among existing competitors (Porter, 1980).

The strategic decisions assist in differentiating an organisation from its competitors in a way that is sustainable in the future, and are different from decisions based on operational effectiveness which are simply aimed at doing activities better (Porter, 1985). Strategy also brings about organisational change and allows organisations to position themselves in the industry, and to make choices regarding what game to play (Johnson et al, 2005). This may involve how well a given game is played, choosing new games to play and playing existing games better (Johnson et al, 2005). However, Nollet et al. (2005) posited that in uncertain world, a strategy is too rigid to help dealing with change, formulation process is time consuming, and that some top managers may not even know how a competitive strategy should look like.

### **1.1.2 Concept of Quality Health Care**

Healthcare quality is the extent to which health services provided to individuals and patient populations improve desired health outcomes (IOM, 2001). The care should be based on the strongest clinical evidence and provided in technically and culturally competent manner with good communication and shared decision making. According to Brook et al. (2000) defining quality health care may involve two components. The first component entails high technical quality care and the patients receives only the procedures, tests, or services performed in a technically excellent manner for which the desired health outcomes exceed the health risks by sufficiently a wide margin. The

second component of quality care is when patients are treated in humane and culturally appropriate manner and are invited to fully participate in deciding about their therapy.

Brent (1989) noted that quality management for health care delivery provides a framework to help hospitals organise for, communicate about, monitor, and continuously improve all aspects of healthcare delivery. It also presents evidence to support the proposition that an organised system to achieve high quality care can lead to lower healthcare costs. In the present national environment a highly structured approach to the pursuit of quality is essential. Rosenthal et al. (2004) observed that interpretations of quality vary in some cultures, while good quality means that an adequate number of caregivers staff the office or facility in certain cultures, in others, it means optimum clinical outcomes. High quality services ensure that clients receive the care that they deserve. Furthermore, providing better services at reasonable prices attracts more clients, increases the use of healthcare services (Creel et al, 2002).

Quality healthcare needs to take a whole-system perspective, and reflect a concern for the outcomes achieved for both individual service users and whole communities (WHO, 2006). In the healthcare industry, quality of care is more than a concept but has become essential to patient well-being and financial survival (Buttell et al, 2007). Providing high quality care also makes sense for service providers, since improving basic standards of care attracts more clients, reducing per capita costs of services and ensuring sustainability (Creel et al, 2002). Quality consists of the degree to which health services for individuals and populations increase the likelihood of desired health outcomes are consistent with



current professional knowledge, and meet the expectations of healthcare users (Buttell et al, 2007). It is, therefore, evident that the two biggest hindrances to quality healthcare from reaching a larger proportion of the population are the high cost of services and poor access to health facilities.

### **1.1.3 Concept of service delivery**

Service delivery is a dynamic concept since it is responsive to customer needs and no one service delivery model should be used exclusively (ASHA, 1999). Articulation of service concept is a central component in designing services and there exists a significant number of varying definitions of service concept from both marketing and operations perspectives (Lally&Fynes, 2006). According to WHO (2008) service provision or delivery is an immediate output of the inputs into the health system, such as health workforce, procurement and supplies and finances. Mahesh and Stanworth (1995) assert that service delivery system design is a systematic means of linking the service concept and customer perceived service quality. However, Wild et. al. (2012) observed that despite significant increases in resourcing, public service delivery is still falling in many developing countries.

A service organisation can only deliver a service after integrating investments in numerous assets, processes, people and materials (Goldstein et.al, 2002). Thus increased inputs should lead to improved service delivery and enhanced access to services (WHO 2008). Systematic, customer focused approaches are required to enable consistent, reliable delivery of high quality service (Mahesh & Stanworth, 1995). Customers are not the only group of stakeholders that must be consulted in the experience concept

articulation process, the employees of the organisation, particularly those who will play a front-line role in the delivery of the proposed service experience, must also be consulted and engaged in the concept articulation process (Lally & Fynes, 2006). Unlike a product, service components are often not physical entities, but rather are a combination of processes, people skills, and materials that must be appropriately integrated to result in the planned or designed service (Goldstein et.al, 2002).

The large number and wide variety of decisions required to design and deliver a service are made at several levels in the organisation from strategic level to the operational level and service encounter levels (Goldstein et.al, 2002). Participation of staff is critical not only in terms of gathering input but it also begins the process of educating employees of importance of their role in the delivery of experience, different behavioural and performance related roles expected of experience providers vis-à-vis service providers (Lally & Fynes, 2006). A major challenge for service organisations is ensuring that decisions at each of these levels are made consistently, focused on delivering the correct service to targeted customers (Goldstein et.al, 2002). Such decisions should ensure availability and access to health services as the main functions of a health system and services should meet a minimum quality standard (WHO, 2008). According to Hernon and Nitecki (2001), fundamental to service quality is the need for cyclic review of service goals and objectives in relation to customer expectations.

#### **1.1.4 National Health Referral Services in Kenya**

National referral refers to any process in which health care providers at lower levels of the health system, who lack the skills, the facilities, or both to manage a given clinical

condition, seek the assistance of providers who are better equipped or specially trained to guide them in managing or to take over responsibility for a particular episode of a clinical condition in a patient (Al-Mazrou et al, 1990). The government's health system is pyramidal, with national health referral facilities forming the peak followed by provincial, district, sub-district hospitals, with health centres and dispensaries forming the base. The national referral hospitals at the apex of the health care system provide sophisticated diagnostic, therapeutic, and rehabilitative services (Muga et al, 2005).

The published national referral hospitals in Kenya are Kenyatta National Hospital and Moi Teaching and Referral Hospital. Kenyatta National Hospital also facilitates education and training in nursing and other health and allied professions; and participates in national health planning (KNH, 2008). The Hospital offers quality specialised health care to patients from the great lakes region, southern and central Africa including Namibia. These services include cardiothoracic surgery, neurosurgery, orthopaedic surgery, plastic and reconstructive surgery and burns management; radiotherapy, critical care services, new born services, renal services besides other services. Training of medical personnel from these countries is also undertaken.

Moi Teaching and Referral Hospital (MTRH) is the second national referral hospital in Kenya after Kenyatta National Hospital (KNH). The hospital receives patients on referral from other hospitals or institutions within or outside Kenya for specialised health care, to provide facilities for medical education for Moi University and for research either directly or through other co-operating health institutions; to provide facilities for

education and training in nursing and other health and allied professions; and to participate as a national referral hospital in national health planning (MRTTH, 2013).

Teaching and referral hospitals provide complex curative tertiary care, preventive care and participate in public health programmes, provide for the local community and the total primary health care system. Referrals from the districts and provinces are ultimately received and managed at the referral hospitals (GoK, 2005). The teaching and referral hospitals serve as centres of excellence and provide complex health care requiring more complex technology and highly skilled personnel (Muga et al, 2005). The most sophisticated health services are available in major cities or at the national level, the next best level of care is found in the provincial hospitals, while at the health centre level and below, a minimum level of care can be expected, with serious conditions being referred to the nearest hospitals or private facilities (Turin, 2010).

The national referral hospitals have a high concentration of resources and are relatively expensive to run. They also support the training of health workers at both pre-service and in-service levels (Muga et al, 2005). However, the mandate for supervision, formulation of policies, establishment and enforcement of standards, and mobilisation of resources for health care rests with the Ministry of Health (Wamai, 2009). The referral hospitals have a specific role in providing information on various health problems and diseases, extra-mural treatment alternatives to hospitalisation, such as day surgery, home care, home hospitalisation and outreach services. They also provide leadership in setting high clinical standards and treatment protocols, research, and in both basic and post-graduate training for health professionals (GoK, 2005).

## **1.2 Research Problem**

Healthcare is a complex adaptive system, and organisations are adopting quality strategies to improve through the implementation of best practice through various interacting disciplines within the system (Puga et al, 2013). Organisations adopt quality strategies to translate health research knowledge into effective health care action (Graham & Tetroe, 2007). To improve health services, most health institutions in Kenya, including the national hospitals have adopted several quality health care strategies. However, the national referral hospitals have fragmented quality management with some using different and or a combination of various quality management systems. This has led to fairly limited understanding of the causal mechanisms of interventions to improve quality of healthcare.

The hospitals involve frequent changes in interventions and adoption of new strategies that appear to be effective and this necessitates evidence based quality improvement intervention (Strite & Stuart, 2005). The necessity of quality in health care is driven by the need to ensure effectiveness, efficiency, accessibility, acceptability or patient centeredness, equitability and safety in health services (WHO, 2006). Several studies have been conducted in the health sector but most of them focused on health sector reforms, utilisation, financing and best practices. For instance, Mitchell et al. (2012) conducted a study on core principles and values of effective team-based health care in the USA. Plsek (2003) reviewed the complexity and adoption of innovation in health care system in the USA. Carroll et al. (2012) also conducted a study on nine leading hospitals in the USA on the use of electronic health records to improve quality and efficiency.

Bruning (2011) investigated economic challenges to healthcare reforms and noted that reforms require leadership of healthcare providers and are economical in nature.

In Kenya, a study by Turin (2010) in healthcare utilisation focused on challenges and opportunities, and high costs and poor access were cited as the major barriers to health care utilisation. Kimalu et al. (2004) also reviewed the health sector in Kenya and acknowledged the need to enhance efficiency in the public health sector to ensure limited resources are used in a more cost-effective manner to address inelastic revenue base and the growing demand for health services. Analysis of situation and enduring challenges in the Kenya health system revealed that more changes are necessary to ease the burden of healthcare costs on households in a bid to increase utilization since cost remains a significant barrier (Wamai, 2009). A study by Oyaya and Rifkin (2002) also examined the sector reforms in Kenya and stressed the need to manage health reforms and identify the most critical processes.

Some studies specific to quality improvement strategies have been conducted in the insurance and education sectors in Kenya. Tsoukatos et al. (2007) on their study on diagnosis and improvement of service quality in the insurance industries of Greece and Kenya, recommends further research to improve the industry's understanding of service quality. A study conducted by Ojiambo (2009) reviewed quality of education and its role in national development, and noted that to be effective, the education process must be multi-dimensional and should encompass cognitive and a normative dimensions. Therefore, the need to need for quality improvement research to bridge knowledge gap

between ideal and actual care on effective quality improvement interventions (Ting et al, 2009; Chopra et al, 2012 ). In future it will not be possible be an effective healthcare provider without both theoretical and practical understanding of the science of quality improvement (Hockey and Marshall, 2009). Inadequate literature on quality healthcare strategies due to limited research has inhibited the acceptance of quality improvement methods in healthcare in Kenya, although implementers are expected to focus on appropriate strategies that target change and to craft interventions to effect that change. Closing this research gap requires a study to create effective quality improvement interventions. Therefore, this study will address the effectiveness of quality healthcare strategies adopted by national referral hospitals.

### **1.3 Conceptual Framework**

Strategic interventions in the provision of healthcare determine the quality of care provided to patients. Improved service delivery at the national referral hospitals depends on adoption of appropriate Quality Management Standards and Systems, Strategic Leadership Training and Results-Based Financing. This can be established through structural, process and outcome measures in the health delivery system. Thus, structural measures of quality healthcare involve effective and efficient systems. On the other hand, process measures include timeliness of care provided to patients. Outcome measures include mortality, readmission, resource consumption, health status, and satisfaction with care. As illustrated in figure 1.3, adoption of appropriate strategies is likely to improve service delivery at the national referral hospitals through the realisation of improved quality of care and better clinical outcomes.

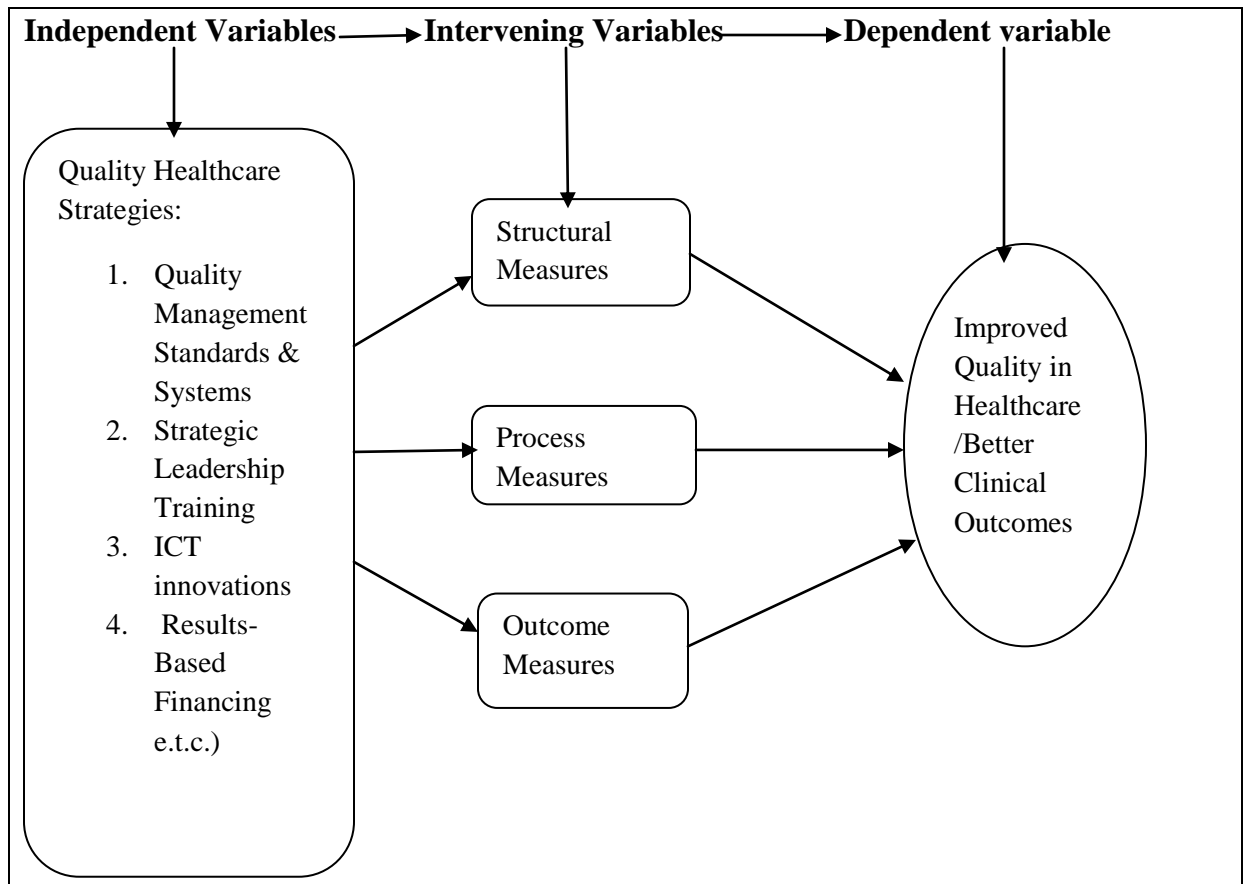


Figure 1.3: conceptual framework: Source: Researcher 2014

## 1.4 Objectives of the Study

The main objective of this study was meant to establish effectiveness of quality healthcare strategies in improving services delivery at the national referral hospitals in Kenya. The researcher explored quality health care strategies adopted by national referral hospitals in Kenya and identified the critical drivers in implementing quality healthcare strategies. Specifically, the study was meant:

- i. To establish quality healthcare strategies adopted by national referral hospitals in Kenya.



- ii. To determine effectiveness of the quality healthcare strategies adopted by the national referral hospitals in Kenya.
- iii. To identify the critical drivers in implementing quality healthcare strategies in the national referral hospitals in Kenya.

## **1.5 Value of the study**

The findings of this study are useful to both the government, management of national referral hospitals, health professionals in medical training institutions and medical practitioners. For **Referral Hospitals**, the challenge to day is a better understanding of the drivers and barriers of implementing strategic interventions. Therefore, the findings of this study will be used to inform the public policy on operational strategies for quality in the health sector. This study will enable the referral hospitals and other health institutions to identify any drivers and reduce or eliminate the barriers by adopting appropriate quality improvement interventions. Thus there is need to identify what appropriate quality strategies has a significant impact on improvement of healthcare. Quality assurance managers in the hospitals can use the study findings to adopt appropriate quality improvement strategies in hospitals by highlighting potential hindrances and levers for change. Thus, an insight on why a quality health strategy fails or succeeds can be easily accomplished when theory and implementation are tested side by side.

**Government:** The government plays a significant role in providing and financing healthcare and many areas of operational deficiencies are not well understood. On the other hand, there is a growing interest worldwide in quality of health systems in various countries. Some developed countries have a stand-alone policy for quality in health but in

developing countries, it is only a few countries with a clear policy for quality healthcare. Further, various health institutions are implementing various quality improvement programmes, some are donor driven and others are requirements the of the performance contract by the Government. Therefore, the findings of this study will be used to inform the public policy on operational strategies for quality in the health sector.

**Academia and medical practitioners:** Delivery of high standard of care is a professional responsibility but professionalism must also embrace commitment to quality improvement initiatives. This study will enhance the understanding of medical practitioners both as trainers and students by recognising that they have to do their work and improve how they do their work. Thus they should appreciate all dimensions of quality in provision of care to the patients. In addition the study will contribute to development of quality indicators that can form part of the training in medical institutions. Thus quality indicators tools can be used by researchers to assess the quality of healthcare across multiple conditions at the country, regional, and medical group level.

## **1.6 Ethical Considerations**

The researcher obtained informed consent from the respondents before the administration of questionnaire. Strict adherence to the guidelines of KNH/UoN Ethics Review Committee and MTRH Institutional Research and Ethics Committee were observed during data collection, analysis and publication of research findings.

## **CHAPTER TWO: LITERATURE REVIEW**

### **2.1 Introduction**

This chapter reviews literature on theoretical foundations of the study, concept of strategy and applications of strategic management in organisations. Strategies for quality improvement and measurements are also explored within the context of provision of quality healthcare.

### **2.2 Theoretical foundations of the study**

Quality Improvement Programmes assists organisations to document and improve processes, understand client requirements and ensure services meet those requirements. Implementing QIPs can be realised using various management models and standards to streamline relationships between the service providers and clients. Zadry and Yusof (2009) asserted that quality management is a long-term process that relies on relative achievements through continual improvement. Franks (2009) revealed a paucity of research related to the development of theoretical models which account for quality management's influence on measures of organisational performance.

Some organisations have adopted Total Quality Management (TQM) which is generally acknowledged as an approach to organisational management in enhancing performance (Franks, 2009). TQM is a philosophy, concept and powerful management approach which involve management and empowerment of people to create satisfied customers and improve organisational performance (Zadry & Yusof, 2009). According to Barouch (2011) Total Quality Management as defined using ISO standards describes general

methods enabling an organisation to be both efficient and effective while demonstrating how such methods should be implemented. Zadry and Yusof (2009) also observed that TQM has been recognised and used during the last few decades by organisations all over the world to develop a quality focus and improve organisational performance.

Studies conducted by Levine and Toffel (2010) have shown that ISO 9001 Quality Management System standard have been adopted by organisations to realise changes in organisational outcomes such as profits. They noted that quality programs such as ISO 9001 improve both management practices and production processes, and that these improvements translate into increased sales and employment. Other organisations have also incorporated Six Sigma to provide new paths to quality improvement. According to Zu et. al. (2008) the three Six Sigma practices entails establishing a Six Sigma role structure within the organisation's human resource management system, instituting the structured improvement procedure as a formal paradigm of conducting improvement projects, and emphasising using quantitative objective metrics in quality improvement. Although Zadry and Yusof (2009) posited that TQM has been identified both as a model for good management and a theory of change.

### **2.3 Concept of strategy**

Some authors and managers view strategy as being about organisational change, while some focus more on the role of strategy in allowing an organisation to position itself in the market, and to make choices regarding what game to play and to determine determining how well a given game is played (Johnson et al., 2005). Thus, strategy is about both, that is choosing new games to play and playing existing games better

(Johnson et al., 2005). Strategy may also be looked at as either a priori statement to guide action or posteriori results of actual decision behavior, and it normally exists at different levels in an organization from corporate levels to departmental levels (Mintzberg et al., 1999).

A typical organisation's strategy is a blend of proactive actions to improve performance and reactions to unanticipated developments and fresh market conditions (Thompson et al., 2007). To respond to market dynamics, strategic decisions in organisations involve substantial allocations of people, physical assets, or moneys that either must be redirected from internal sources or secured external sources, and also commit the organisation to actions over an extended period (Pearce & Robinson, 2011).

## **2.4 Strategic Management**

Strategic actions are based on what managers forecast, rather than what they know, and emphasis is placed on the development projects that will enable the firm to select the most promising strategic options (Pearce & Robinson, 2011). Crafting a strategy represents a managerial commitment to pursue a particular set of actions in growing the organisation, attracting and pleasing customers, competing successfully, conducting operations and improving financial and market performance (Thompson et al., 2007). Simply choosing a strategy means nothing if that strategy is not implemented, and strategy implementation occurs when a firm adopts organisation policies and practices that are consistent with its strategy (Barney, 2007). The strategy choices of an organisation make are seldom easy decisions and some may turn out to be wrong but that is not and an excuse for not deciding on a concrete course of action (Thompson et al.,

2007). Organizations have considerable freedom in choosing the ‘hows’ of strategy, thus some chose to improve their performance and market standing by achieving lower cost than rivals while others pursue product superiority or personalised customer service or the development of competencies and capabilities that rivals cannot match (Thompson et al., 2007).

Evaluating and choosing a strategy requires an understanding of both the economic logic from which a strategy is derived, and an understanding of the organisational logic through which a strategy is implemented. A failure in either of these areas-in understanding the economics of strategic choice or the organisational elements of strategy implementation-make it less likely that a firm’s strategy will generate high levels of performance, although even firms with how horrible strategies can sometimes get lucky (Barney, 2007). Effective strategies should at minimum encompass certain critical factors and structural elements such as clear, decisive objectives, maintaining the initiative by preserving freedom of action and enhancing commitment (Mintzberg et al., 1999). A strategy-focused organisation stands a better chance of succeeding when in it is predicated on actions, business approaches, and competitive moves aimed at appealing to buyers in ways that set a company from rivals and carving its own market position, and is more likely to be a strong bottom-line performer than a company whose management views strategy as secondary and puts its priorities elsewhere (Thompson et al., 2007).

## **2.5 Strategies for quality improvement**

Improvement occurs through using quantifiable measures in a continuous, rather than one-time process (NCIPH, 2008). Quality improvement takes its cue from reform approaches in other industries and is driven especially by studies indicating a shockingly

widespread incidence of medical errors and a striking lack of consistency in the standard of care patients receive in different facilities and from different practitioners (Jennings, 2007). These initiatives demonstrate different quality improvement implementation models from self-initiated work of local and state agencies to encouragement and support through multi-site and national efforts (NCIPH, 2008).

Quality improvement strategies are innovative, interdisciplinary movement aiming to transform entrenched attitudes, practices, and management styles that no longer serve the needs of patients and families (Jennings et al., 2007). Quality improvement methods are used constantly to improve many facets of organisational performance and health outcomes (NCIPH, 2008). The strategies have begun to make substantial improvements in the delivery of healthcare in the various countries. According to Jennings et al. (2007) it involves using knowledge gained from the disciplines of medicine, nursing, healthcare management, and medical and health services research, attempts to mobilise people within the healthcare system to work together in a systematic way to improve the care they provide.

In some countries, performance-based payment programmes are an increasingly common strategy for motivating quality improvement (Friedberg et al., 2010). Thus quality-based payment pioneers are using a variety of incentive structures, and are tapping a rich mix of structural, process, and outcome standards to benchmark quality (McNAMARA, 2005). However, reducing healthcare disparities is an equally important policy goal to most developing countries like Kenya, and performance-based payments may hinder vulnerable populations access to quality healthcare (Friedberg et al., 2010). Despite

significant operational challenges, quality-based payment has been implemented in some developing as well as developed countries (McNAMARA, 2005).

## **2.6 Measurement of quality in healthcare services**

In recent decades, there has been a strong focus on initiatives to improve healthcare quality across the world (Werner & Asch, 2007). There is also a growing recognition of national and local healthcare performance measurement and reporting as essential if these initiatives are to achieve their full potential (Werner & Asch, 2007). Healthcare quality measurement has long been the biggest hurdle in deciding what to measure and how to measure it (Ilminen, 2003).

Debates in healthcare quality forums have shifted in recent decades from whether quality can be measured to how best to measure quality in health care (Boyce, 1996). According to American Heart Association (2000) quantifying and improving the quality of healthcare is an increasingly important goal, and a few stalwarts clinging to a notion of quality as being intangible have been left behind. Thus, quality measurements are changing the way we define accountability and financial incentives within our healthcare system (AHA, 2000).

### **2.6.1 Structural measures**

Quality measurement presents choices about measures and their derivation, and several agencies have set out the guiding principles for selection of indicators and their production and use (Werner & Asch, 2007). Most current healthcare performance measure systems require extensive medical record review, because administrative data



are often incomplete (AHA, 2000). However, the importance of measuring and monitoring healthcare quality is no longer in doubt, and yet quantifying healthcare quality is a complex and challenging process for which public and payer demands clearly exceed current capabilities (AHA, 2000).

The structural measures of quality healthcare involve effective systems and trained emergency medical services personnel to improve emergency response times and pre-hospital survival (AHA, 2000). Problems most frequently occur in capitated managed healthcare systems, in which managed care plans pay healthcare providers a fixed amount over a given period to care for a patient regardless of the nature of the treatment (Ilminen, 2003). Emergency department protocols can also reduce time to reperfusion (AHA, 2000). Medical personnel with special expertise are more likely to provide the correct treatments, producing better patient outcomes, therefore, improved organisational systems can reduce errors, improve disease-management and reduce hospitalisation costs while maintaining or improving quality of care (AHA, 2000).

### **2.6.2 Process measures**

Few quality measures currently exist for timeliness of care, which was identified in the IOM's Quality Chasm Report as an important aspect of healthcare quality (Raleigh & Foot, 2010). Measurement of quality in healthcare often misses areas where an evidence base and/or data are not available, or aspects of quality that are not readily quantifiable (Werner & Asch, 2007). Appropriate diagnosis, effective education of patients,

preventive strategies, proper length of stay, counseling of patients about their care and prognosis can improve quality of healthcare (AHA, 2000).

In process measurements, it has been noted that a hospital assessment may suggest underutilisation when many physicians are legitimately waiting several weeks after discharge to start patients' medications (AHA, 2000). Sometimes patients supply their own data, which may be inaccurate, incomplete and subjectively interpreted (Ilminen, 2003). Measuring the quality of healthcare and using those measurements to promote improvements in the delivery of care to influence payment for services, and to increase transparency are now commonplace, and the measurement strategy must accurately capture whether the evidence-based care has been delivered (Chassin et al, 2010). Therefore, quality measurement should be seen as one tool in a broader quality improvement strategy.

### **2.6.3 Outcome measures**

Health status and other outcome measures may appear to be offered as alternatives to structure or process measures which are in competition with them (Boyce, 1996). According to AHA (2000), 'outcomes' is an important measure of the success of patient care and include mortality, re-admission, resource consumption, health status, and satisfaction with care.

Interpretations of quality vary, in some cultures good quality means adequate number of caregivers, staff or facility, and in others it means optimum clinical outcomes (McNAMARA, 2005). Outcome measures should be collected for use in internal quality-

improvement activities and over time results should be used to identify potential opportunities to improve care (AHA, 2000).

The National Committee on Vital and Health Statistics (2004) noted that despite the undisputed influence of many factors unrelated to healthcare such as age, gender, environment, genetics and behavior, health outcomes represent the quality measures most salient to consumers, as well as to many purchasers of health benefit plans. However, mortality is not always an indication of poor quality care in long-term illnesses and may be the inevitable consequence even where a patient may have received excellent care (AHA, 2000). Thus, suffering associated with such conditions may be substantial and health status measures may be as important as survival rates (AHA, 2000).

## **CHAPTER THREE: RESEARCH METHODOLOGY**

### **3.1 Introduction**

This chapter describes the research methodology used for this study. Specifically it outlines research design used, population of the study, data collection methods and data analysis techniques.

### **3.2 Research design**

Descriptive survey design was used to describe and portray characteristics of the population of the study. This involved collecting both quantitative and qualitative data using semi-structured questionnaire to enable the researcher to profile the population by gathering accurate information (Burton, 2000). A census survey was conducted at the two national referral hospitals due to the small sample. The study used inductive and deductive content analysis. Quantitative data were subjected to descriptive and inferential analysis.

### **3.3 Population of the study**

The population of this study comprised two national referral hospitals in Kenya, namely Kenyatta National Hospital and Moi Teaching and Referral Hospital. The two hospitals have a total of 96 departments and units performing clinical and administrative functions. KNH has 53 and MTRH has 43, inclusive of departments and units. Due to the small sample, a census survey was conducted at the two national referral hospitals.

### **3.4 Data collection**

Primary data were collected using semi-structured questionnaire. The questionnaire was divided into four parts: Part I covered background information of the respondents; Part II collected data on quality healthcare strategies; Part III addressed questions on effectiveness of quality healthcare strategies; and Part IV included information on critical drivers of quality healthcare strategies implementation. The questionnaire was pre-tested to refine and improve based on the respondents' feedback. This was to ensure that the validity and reliability of the data collected was embedded in design of questions, structure of questionnaire and the rigour of pre-testing (Saunders et al, 1997). Data were collected from various heads of departments and units, and in-charges of various wards and the questionnaires were self-administered.

### **3.5 Data analysis**

Data analysis involved arranging and presenting the information collected from the two hospitals. Each questionnaire was coded and data entered in SPSS version 17.0. Regression analysis was done to measure significance of relationships between the dependent and independent variables. Analysis was done using one-tailed test to establish regression coefficient at 95% confidence interval. Qualitative data was subjected to content analysis to test theoretical issues to enhance understanding and analysis of data, and to distil words into fewer content into related categories (Elo & Kyngas, 2008). Quantitative analysis assisted in creating figures and tables to show the frequency of occurrence through establishing statistical relationships between variables and statistical modeling (Saunders et al, 1997).

## **CHAPTER FOUR: DATA ANALYSIS, FINDINGS AND INTERPRETATION**

### **4.1 Introduction**

This chapter presents findings on effectiveness of quality healthcare strategies in improving service delivery at the national referral hospitals in Kenya. Specifically, the chapter presents findings on the background information of the respondents, quality healthcare strategies adopted by KNH and MTRH, effectiveness of the quality healthcare strategies and critical drivers of healthcare strategies implementation. Out of 96 questionnaires which were administered to various departments and units in the two hospitals, 67 were completed and returned. Therefore, the findings are based on 69.8% response rate.

### **4.2 Background information of the respondents**

The study targeted respondents in both clinical and administrative functions of the hospitals. The respondents included those in management positions of their respective areas such as heads of departments and units, and in-charges of various wards. Data collected on background information included type of department, number of respondents in terms of hospital functions, and number of staff segregated in terms of medical and non-medical staff. Majority (20.9%) of the respondents were from units under medicine, followed by Private Wing (10.45%), Mental Health (10.45%) and Surgery (8.96%) as indicated in Table 4.2.

Table 4.2: The number of respondent according to the departments

Department	Frequency	Percent
Medicine	14	20.9
Reproductive Health	3	4.5
Surgery	6	9.0
Orthopedic	3	4.5
Pediatrics	1	1.5
Accident and Emergency	3	4.5
Dental Services	1	1.5
ENT	1	1.5
Radiology	1	1.5
Renal	2	3.0
CCU	1	1.5
Private Wing	7	10.4
Ophthalmology	1	1.5
Physiotherapy	1	1.5
Palliative Care	1	1.5
Mental Health	7	10.4
Patient Affairs	1	1.5
Not indicated	2	3.0
ICT	1	1.5
Finance	1	1.5
Administration	1	1.5
Laundry	1	1.5
Telephone	1	1.5
Human Resource	1	1.5
Corporate Affairs	1	1.5
Supply Chain Management	1	1.5
Technical Services	1	1.5
Risk and Audit	1	1.5
Risk and Quality	1	1.5
Total	67	100.0

#### 4.2.1 Number of respondents in terms of hospital functions

According to the findings, 83.58% were from clinical functions and 16.42% were from administrative services of the hospitals as illustrated in Table 4.2.1. Clinical care and

treatment is the core function of the national referral hospitals as represented by the majority of the respondents in the study.

Table 4.2.1: Number of respondents in terms of hospital functions

	Frequency	Percent
Clinical Services	56	83.6
Administrative Services	11	16.4
Total	67	100.0

### 4.3 Quality Healthcare Strategies for Improving Service Delivery

The study also investigated various quality healthcare strategies adopted by the hospitals to improve their systems and processes. These strategies included training of staff in strategic leadership, Results-Based Financing (RBF), adoption of ICT and quality management systems and standards.

#### 4.3.1 Strategic Leadership Training

According to the findings 32.8% of the respondents considered strategic leadership training as very successful, 32.8% somewhat successful and 11.9% highly successful. Only 4.5% of the respondents indicated that it was unsuccessful as shown in Table 4.3.1 below. Therefore, it can be presumed that training of hospital managers on strategic leadership was successful in improving service quality at the two national referral hospitals.

Table 4.3.1 Success of strategic leadership training in improving service delivery

	Frequency	Percent
Highly Successful	8	11.9
Very Successful	22	32.8
Somewhat Successful	22	32.8
Unsuccessful	3	4.5
Not implemented	6	9.0
Non-response	6	9.0
Total	67	100.0



The findings are corroborated with the study by O'Reilly et.al. (2010) on consistency of leadership effectiveness on the implementation of strategic initiative in a large healthcare system. They found that only when leaders' effectiveness at different levels was considered in the aggregate that significant performance improvement occurred. Further, they observed that the largest change in patients' ratings of access and service occurred when the Chief Executive Officer and Physician In-charge were both seen as effective leaders. They also noted a decrease in impact on change in performance as leadership effectiveness diminishes.

There is also evidence that educational interventions to improve quality of care are effective, and that in future it will not be possible to be an effective clinician without both a theoretical and a practical understanding of the science of quality improvement (Hockey and Marshall, 2009). The study finding is also consistent with Buttell et. al (2007) who observed that leadership is vital to improving the focus as well the performance in patient safety since leaders help shape the agenda that is shared among all the participants in the healthcare system. This shows clearly that training on strategic leadership has a significant impact on quality of services provided by the hospitals.

#### **4.3.2 Results-Based Financing**

The findings on RBF showed that, 47.8% of the respondents who implemented Results-Based Financing consider it somewhat successful, 16.4% very successful and 4.5% indicated that it was highly successful as illustrated in Table 4.3.2. However, 13.4% considered RBF unsuccessful. This implies that RBF was successful in improving service delivery systems and processes, leading to improved service quality.

Table 4.3.2 Success of results-based financing in improving service delivery

	Frequency	Percent
Highly Successful	3	4.5
Very Successful	11	16.4
Somewhat Successful	32	47.8
Unsuccessful	9	13.4
Not implemented	7	10.4
Non-response	5	7.5
Total	67	100.0

A report by Open Health Initiative (2012) indicated that RBF has proven to strengthen health systems, improve health management information system, increase accountability and strengthen governance. Further, the report noted that RBF motivates healthcare workers to provide comprehensive and quality services, however they observed that RBF must not be seen as a stand-alone intervention.

Further research conducted by Carroll, et. al (2007) revealed that making structural and organisational changes required financial investments, such as hiring hospitalists staff, and purchasing and supporting new technologies. However, these investments seemed reasonable during flush times, but were difficult to maintain when the economy or local healthcare market declined, and cutbacks were often necessary. They observed that the hospital feared that reimbursement rates may decline in future, thereby making further quality programmes even more challenging. Therefore, RBF alone may not be relied on for service delivery improvement at the hospitals.

### 4.3.3 Adoption of ICT

The study investigated the extent to which ICT is considered successful in improving service delivery at the national referral hospitals in Kenya. The findings showed that 53.7% somewhat successful, 22.45 very successful and 4.5% considered adoption of ICT highly successful. On the other hand, 7.5% of the respondents considered adoption of ICT as unsuccessful. Another, 6.0% of the respondents did not adopt ICT and they indicated that their operations were not automated. It is apparent that application of ICT to improve Hospitals' service delivery system was successful.

Table 4.3.3 Success of ICT adoption in improving service delivery

	Frequency	Percent
Highly Successful	3	4.5
Very Successful	15	22.4
Somewhat Successful	36	53.7
Unsuccessful	5	7.5
Not implemented	4	6.0
Not indicated	4	6.0
Total	67	100.0

The findings conform to the reviews done by British Columbia Medical Association in 2006 on how IT reduced waiting times, particularly time taken to see a specialist. It was observed that telemedicine enabled access to specialists and minimised the need for patients to travel. It was also noted that ICT enabled access to up-to-date information about the estimated waiting time for in-patient and out-patient treatment. Therefore adoption of ICT can drastically reduce turnaround time if fully adopted in the operations of the hospitals.

#### 4.3.4 Quality Management Systems and Standards

According to findings, 38.81% of the respondents felt adoption of Quality Management Standards was very successful, 31.34% somewhat successful and 20.9% indicated that it was highly successful as indicated in Table 4.3.4 below. It is possible to conclude that adoption of QMS was successful in improving quality of services provided by the hospitals.

Table 4.3.4 Success of Quality Management Standards and Systems in improving service delivery

	Frequency	Percent
Highly Successful	14	20.9
Very Successful	26	38.8
Somewhat Successful	21	31.3
Non-response	6	9.0
Total	67	100.0

The findings are corroborated with Heuvel (2001) who observed that integrating ISO and Six Sigma in a hospital operations yielded benefits such as an excellent document control system, an increase in production and a decrease in costs resulting to improved efficiency. Another study by Chopra et. al. (2012) also indicated that audit and feedback strategies prompt providers to modify their assessment and management practices when these practices are not consistent with the accepted guidelines. Therefore, adoption of QMS has been proven to enhance performance of a hospital and helped to achieve strategic goals, growth, cost containment and to optimise quality.

#### 4.4 Other Quality Improvement Strategies

In addition to key strategic interventions in improving service delivery, 20.9% of the respondents also indicated that they have put in place other quality improvement programmes to improve their services. These included implementation of GEMBA 5S KAIZEN, Kenya Quality Model for Health (KQMH), clinical audits, use of protocols and on-job training. According to the findings, 50% felt that specific interventions at departmental level was very successful, 29% indicated that the interventions were highly successful, and 21% felt that the interventions were somewhat successful as illustrated in Table 4.4. It is apparent that interventions at the departmental level were successful in improving quality of services provided by them.

Table 4.4 success of other quality improvement initiatives in improving service delivery

	Frequency	Percent
Highly Successful	4	29
Very Successful	7	50
Somewhat Successful	3	21

Berenson, et. al (2013) also observed the need to use quality measures strategically by adopting other quality improvement approaches where measures fall short. In their strategy, they suggested tasking a single entity with defining standards for measuring and reporting quality and cost data to improve the validity and comparability of publicly reported quality data. It can be presumed that the strategic interventions initiated at the functional units are likely to have a higher success rate. It is also possible to conclude that various functional units may perceive institutional-driven programmes as requiring compliance rather than commitment on their part as opposed to their own initiatives hence a higher success rate.

## **4.5 Effectiveness of Quality Health Care Strategies In Improving Service Delivery**

This section highlights findings on effectiveness of quality healthcare strategies in improving structures, process and outcomes at the national referral hospitals in Kenya. Specifically, it presents findings on effectiveness of these strategies on follow-up systems, feedback mechanisms, time taken to serve clients, re-admission rates, average rates of mortality, infection and length of in-patient stay, and level of client satisfaction with services provided by the hospitals. To establish the effects of various healthcare strategies on service quality simple regression analysis was done and the results are shown in Tables 4.5.1 and 4.5.2.

### **4.5.1 Effectiveness of quality healthcare strategies on service delivery systems and processes**

The findings showed a perfect positive relationship between the quality healthcare strategies and service delivery systems, and processes. Although varying degrees of relationship between independent and dependent variables was noted as indicated in Table 4.5.1.

Table 4.5.1: Regression coefficients of linear associations between quality healthcare strategies and service delivery systems, and processes

Independent variables	Dependent Variables				
	Follow up systems	Feedback to clients	Time taken to admit patients	Time taken to attend to walk-in patients	Time Taken to discharge patients
Strategic Leadership Training	.207	.748	.875	.302	.946
Results Based Financing	.296	.675	.734	.535	.835
ICT adoption/innovation	.829	.231	.348	.225	.003
Quality Management Standards and Systems	.005	.018	.434	.316	.288
Other Quality Improvement Initiatives	.300	.799	.201	.528	.207

The relationship between application of ICT and follow-up systems had a very high regression coefficient compared to other strategic interventions adopted by the hospitals to improve service quality and delivery systems. This conforms to the findings of MEDPAC report (2004) presented to the USA congress on new approaches to medicare. The report showed that application of ICT provides new ways for health care providers and patients to readily access and use health information, thereby improving the quality, safety, and efficiency of healthcare.

Strategic Leadership Training, RBF and specific strategic interventions by the departments showed a higher significant relationship with time taken to provide feedback to clients. On the other hand, time taken to attend to walk-in patients had a stronger

positive relationship with RBF and specific strategic interventions by the departments to improve service quality.

It was also noted that time taken to admit and discharge patients had a higher significant relationship with strategic leadership training and RBF as illustrated in the corresponding regression coefficients in Table 4.5.1. A study conducted by Weiner (2009) noted that some of the most promising organisational changes in healthcare delivery require collective, coordinated behavior change by many organisational members involving quality improvement programs and patient safety systems. On the other hand, Brook et.al. (2000) also observed that financial incentives directed at health system level have can cause positive effect on quality of care and treatment.

It is possible to conclude that effective leadership is critical in improving service quality but it should be complemented with key strategic interventions at all functional levels, including but not limited to provision of requisite resources. This implies that concerted effort and or building of synergies are critical in improving service quality in the hospitals.

#### **4.5.2 Effectiveness of quality healthcare strategies on improving service delivery outcomes**

The findings showed a perfect positive relationship between quality healthcare strategies and service delivery outcomes as indicated in Table 4.5.2. These included re-admission rates, average rates of mortality, infection rates, length of in-patient stay, time taken to



serve clients, average waiting time and level of client satisfaction with services provided by the hospitals.

Table 4.5.2: Regression coefficients of linear associations between quality healthcare strategies and service delivery outcomes

Independent variables	Dependent Variables							
	Readmission rate	Mortality rate	Infection rate	Length in-patient stay	Time taken to serve internal client	Time taken to serve external client	waiting time	Level of client satisfaction
Strategic Leadership Training	.974	.856	.145	.650	.343	.310	.403	.265
Results Based Financing	.677	.816	.229	.824	.379	.392	.422	.034
ICT adoption/innovation	.187	.012	.236	.529	.037	.046	.035	.975
Quality Management Standards and	.497	.351	.105	.719	.005	.005	.007	.146
Other Quality Improvement Initiatives	.971	.656	.380	.778	.305	.261	.298	.784

According to the findings, Strategic Leadership Training, RBF, and quality improvement interventions at the departmental level had a high significant relationship with rates of readmission, average mortality, and to lesser extent time taken to serve clients and average waiting time to be served. It was also observed that quality healthcare strategies adopted by the hospitals had a positive effect on average rate of infection, albeit with minimal difference in the degree of relationship.

Strategic interventions at the departmental level and rates of infection indicated a slightly significant relationship compared to other study variables. It was also noted that quality healthcare strategies adopted by the hospitals had a very significant relationship with average length of in-patient stay. On the other hand, application of ICT and specific strategic interventions by the departments to improve quality of services had a higher significant relationship with the level of client satisfaction.

A study by Agbor and Eriksson (2011) of three Service sectors in Umeå showed that interventions to improve service quality dimensions and customer satisfaction are significantly related. The findings by Health Foundation report (2012) also showed that participation in leadership programmes catalysed improvements in hospitals. The report indicated that the Shared Leadership for change programme meant that a team from Carmarthenshire Diabetes Network successfully moved routine diabetes care from secondary to primary care, resulting in dramatic reduction in waiting times from 12 months to no wait for new secondary care appointments. The findings of the study have showed that quality health care strategies adopted by the hospitals impacted greatly on improving service delivery outcomes although with varying degrees. This implies that an integrated approach is required to optimise quality of treatment and care provided by the referral hospitals in Kenya.

## 4.6 Critical Drivers of Quality Healthcare Strategies Implementation

The study intended to establish the critical drivers in the implementation of quality healthcare strategies, including strategic plan, service delivery charter, vision, mission, and human resources and physical facilities in the two hospitals.

### 4.6.1 Strategic Plan

Regarding the usefulness of strategic plan, majority of the respondents (43.3%) indicated that strategic plan was critical in improving service delivery to a great extent, 28.4 felt the extent was very great, and 14.9% indicated that it had moderate impact on service delivery. It is evident that strategic plan is useful in improving delivery of services at the hospitals as illustrated in Table 4.6.1 below.

Table 4.6.1: Extent to which strategic plan is useful

	Frequency	Percent
Very Great Extent	19	28.4
Great Extent	29	43.3
Moderate Extent	10	14.9
Non-response	9	13.4
Total	67	100.0

A study conducted by Perera and Peiró (2012) also showed that strategic plan is a useful tool for steering health care organisations. They observed that process of strategic planning is programmable, systematic, rational, and holistic and integrates the short, medium and long term, allowing the healthcare organisation to focus on relevant and lasting transformations for the future.

#### 4.6.2. Service Delivery Charter

According to findings, 44.8% indicated that their service delivery charters played a great role in service delivery improvement, 34.3% indicated that it played a very great role and 14.9% felt it was moderate as indicated Table 4.6.2 below. This clearly shows that service delivery charter is critical in ensuring efficiency and effectiveness in the hospitals' services.

Table 4.6.2: Extent to which service delivery charter is useful

	Frequency	Percent
Very Great Extent	23	34.3
Great Extent	30	44.8
Moderate Extent	10	14.9
Non response	4	6.0
Total	67	100.0

This conforms to the report by the Consumers Health Forum of Australia (2008) that a charter of rights and standards for healthcare consumers is what is needed to ensure that the entire healthcare system benefits by becoming more accountable to the citizens who pay for it and more responsive to the consumers who need to use it.

#### 4.6.3 Vision

In relation to the vision of the referral hospitals, most respondents, 43.3% indicated that their vision was very useful in improving services to a great extent, 31.3% felt the extent was very great, 17.9% indicated it was moderate and 1.5% felt it that the extent to which the vision assisted in improving service delivery was small. Study conducted by Darbi (2012) has also shown that vision statement is still relevant strategic management tools

that can impact employee behaviour and attitudes in consistence. It can be concluded that shared vision at all functional levels of the hospitals can potentially improve service quality.

Table 4.6.3: Extent to which vision is useful

	Frequency	Percent
Very Great Extent	21	31.3
Great Extent	29	43.3
Moderate Extent	12	17.9
Small Extent	1	1.5
Non-response	4	6.0
Total	67	100.0

#### 4.6.4 Mission

Majority of the departments (41.8%) indicated that their mission was very important in improving services to their clients to a great extent, 34.3% felt the extent was very great and 17.9% indicated that it was moderate. This conforms to the findings by Darbi (2012) that employees see ownership as a prerequisite for the statements to impact on their behaviours and attitudes. He opined that mission and vision statements impact on strategy and most aspects of organisational performance. Therefore, it can be presumed that contributes to service quality at the national referral hospitals.

Table 4.6.4: Extent to which mission is useful

	Frequency	Percent
Very Great Extent	23	34.3
Great Extent	28	41.8
Moderate Extent	12	17.9
Non-response	4	6.0
Total	67	100.0

#### 4.6.5 Other critical drivers

In Table 4.6.5 below, it can be observed that quality audits and implementation which involves monitoring and evaluation of quality programmes played a critical role in improving service delivery as noted by 29% of the respondents. Commitment of staff (22%) was also noted as another key driver of quality improvement strategy since staff were the implementers. This also required a lot of sensitisation and training of staff (19%) as demonstrated in the study findings. Quality assurance circles (15%) which involved formation of quality improvement teams at all levels in the hospitals to drive the strategic intervention were critical in the realisation of intended results. On the other hand, management commitment was also required to ensure effective implementation of quality improvement strategies. Other critical drivers identified included availability of required facilities and adoption of ICT in the hospitals' operations.

Table 4.6.5: Other critical drivers

Driver	Percentage response
Quality Audits and implementation	29%
Staff commitment	22%
Sensitisation and training	19%
Quality assurance circles	15%
Management commitment	9%
Availability of necessary supplies/facilities	4%
Adoption of ICT applications	2%

Case studies of four hospitals by Silow-Carroll et. al. (2007) revealed that a trigger such as a crisis or new leader prompted the hospitals to make organisational and structural changes such as multidisciplinary teams, quality-related committees, and technology

investments, and this facilitated a systematic problem-identification and problem-solving process, resulting in new treatment protocols and practices, which in turn result in improved outcomes.

#### **4.7 Challenges Facing Implementation of Quality Healthcare Strategies**

Adoption of quality improvement strategies are always faced with challenges and the national referral hospitals are not exempted from such impediments. Despite successful implementation of quality improvement strategies, the respondent departments noted some challenges. The respondents cited staff shortage as biggest challenge (31%), followed by inadequate facilities (30%) and staff attitude (13%) as indicated in Table 4.7 below.

Table 4.7: Challenges facing implementation of quality health care strategies

Challenge	Percentage response
Inadequate facilities	31%
Shortage of staff	30%
Staff attitude	13%
Slow response by support departments	10%
Inadequate funds	7%
Inability of patients to pay	3%
Inadequate computerisation of services	2%
Poor maintenance of wards	2%
Congestion in the wards	2%

Other challenges cited were slow response by support departments when their services were required, inadequate funds, inability of some patients to pay for services, poor maintenance of facilities, inadequate computerization of services, and congestion in the

wards due to high number of patients admitted. However, a well developed quality policy and strategy can be used to overcome the challenges and mobilize stakeholders to act towards attaining higher quality services (WHO, 2008).

#### **4.8 Discussion of Findings**

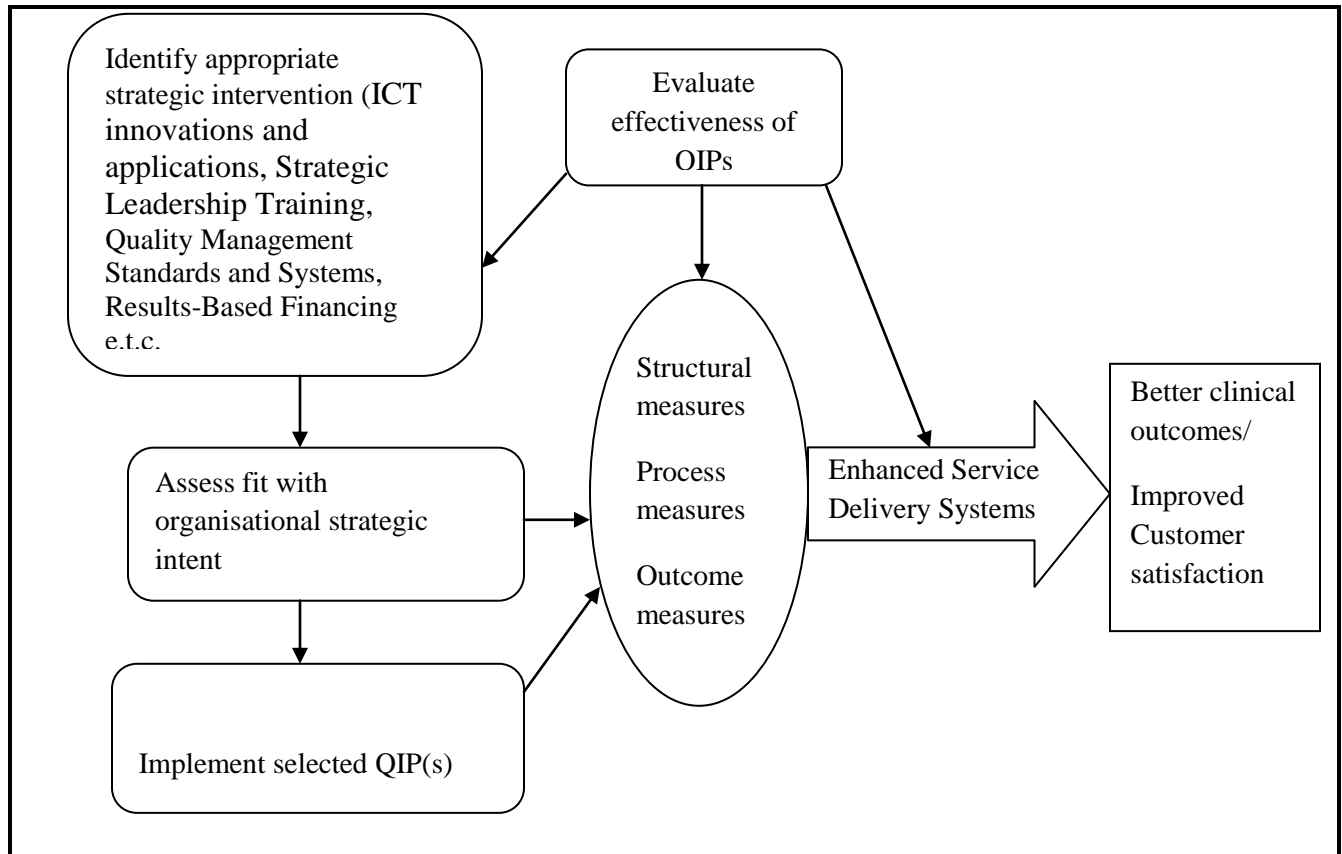
The findings of this study have indicated that healthcare strategies have a positive effect on service quality at the national referral hospitals, although the impact of the strategies varied. For instance adoption of ICT applications and innovations had a greater impact on follow-up systems compared to other strategic interventions adopted by the hospitals to improve service quality and delivery systems. It was also noted that Strategic Leadership Training, RBF, and quality improvement interventions at the departmental level had a high significant effect in improving service quality outcomes such as rate of readmission, average mortality rate, time taken to serve clients and average waiting time to be served.

Some specific interventions by the departments to reduce rates of infection indicated a slightly significant relationship compared to other interventions. Quality healthcare strategies adopted by the hospitals also had a very significant relationship with average length of in-patient stay. The level of client satisfaction showed a greater significant relationship with the adoption of ICT and specific strategic interventions by the departments to improve service quality. Therefore, quality improvement at the national hospitals requires a multifaceted approach targeting all functions, and adoption of appropriate model for implementation of the strategies. The model should address the



unique characteristics of various institutions to determine the best fit when selecting quality improvement programmes as illustrated in Figure 4.8.

Figure 4.8: Model for implementation of quality healthcare strategies



Source: Researcher, 2014

This model involves identification of appropriate QIP(s) for the hospital's strategic interventions based on the fit with their strategic intent. The next step involves implementation of selected QIP(s). This is followed by evaluation of effectiveness of selected QIP(s) on structural, process and outcome measures in enhancing service delivery systems to realise better clinical outcomes and or highest levels of client satisfaction as illustrated in Figure 4.8.

Regarding the critical drivers in implementing the strategies, majority of the respondents indicated that strategic plan, service delivery charter, vision and mission were useful in improving delivery of services in the hospitals. On the other hand, other implementation drivers were also identified. These included human and physical resources, and programmatic interventions. Specifically, it was observed that quality audits and implementation which involves monitoring and evaluation of quality programmes played a critical role in improving service delivery. On the other hand, staff commitment was also noted as another key driver of quality improvement strategy since staff were the implementers. Quality assurance circles which involved formation of quality improvement teams at all levels in the hospitals to drive the strategic intervention were critical in realisation of intended results.

Implementation of quality health strategies also faced some challenges. The findings indicated biggest challenge as staff shortage, inadequate facilities and staff attitude. Other challenges identified included slow response by support functions, inadequate funds and computerisation of services. The hospitals also face the problem of inability of some patients to pay for services and poor maintenance of facilities. Congestion in the wards due to high number of patients admitted was also cited by the respondents.

## **CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS**

### **5.1 Introduction**

This chapter presents a summary of the findings, conclusions and recommendations for the further research based on study findings. It also highlights the limitations of the study and implications to theory and practice in the management of national healthcare.

### **5.2 Summary of the findings**

The study has revealed interplay of factors in influencing effectiveness of quality healthcare strategies. This has been demonstrated through the potential of various quality healthcare strategies in improving service delivery systems, processes and service quality outcomes. The hospitals adopted various strategies including strategic leadership training, RBF, adoption of ICT and QMS. In addition the departments in the hospitals adopted specific quality improvement interventions which were highly successful in improving service quality.

The effectiveness of health quality strategies was illustrated on various aspects of service delivery indicators. These included follow-up systems, feedback mechanisms, the time taken to serve clients, re-admission rates, average rates of mortality, infection and length of in-patient stay, and level of client satisfaction with services provided by the hospitals. Application of ICT had a greater significant on follow-up systems compared to other strategic interventions adopted by the hospitals to improve service quality and delivery systems. Strategic Leadership Training, RBF, and quality improvement interventions at the departmental level had a high significant effect in improving service quality outcomes

such as rate of readmission, average mortality rate, time taken to serve clients and average waiting time to be served.

Some specific interventions by the departments to reduce rates of infection indicated a slightly significant relationship compared to other interventions. Quality healthcare strategies adopted by the hospitals also had a very significant relationship with average length of in-patient stay. The level of client satisfaction showed a greater significant relationship with the adoption of ICT and specific strategic interventions by the departments to improve service quality. It is also apparent that a concerted effort is required to ensure effective implementation of appropriate strategies to provide quality treatment and services.

The critical drivers in the implementation of quality healthcare strategies included strategic plan, service delivery charter, vision and mission. Other the critical drivers were effective quality improvement teams and commitment by staff to deliver quality services to clients. Regarding the challenges, staff attitude was identified as one of the greatest impediments to implementation of quality improvement strategies. This challenge can be addressed through continuous training and awareness creation among various cadres of staff to enable them to develop the positive attitude. Other challenges to implementation of the strategies were inadequate resources, both human and physical facilities. This could be addressed by ensuring efficiency through adoption of lean management.

Apart from institutional driven interventions, some departments in the hospitals adopted specific programmes to improve service delivery. According to the study findings, such initiatives at functional units were rated as successful. Therefore, the hospitals' management should encourage specific interventions by various departments and units, as such initiatives are easily owned by them as opposed to institutional-driven programmes. Thus, interventions by the hospitals' management may be perceived by staff as tools for supervision and this may elicit compliance rather than commitment. Therefore, successful implementation of strategic interventions requires building of effective teams and at the same time ensuring buy-in by all cadres in an organisation.

## **5.2 Conclusion**

The study investigated effectiveness of quality healthcare strategies in improving service delivery at the national referral hospitals in Kenya. The findings showed that adoption of various healthcare quality strategies are effective in enhancing services provided by the hospitals. It has also been noted that different quality improvement strategies had varying degrees of relationships with structural, process and outcome measures. This implies that adoption of any specific strategy may not realise excellence in service quality and health outcomes.

Holistic approach that focuses on standards, resources and people is required to ensure positive results at all levels in the hospitals' service delivery system. Therefore, it is necessary to adopt an integrated approach in the implementation of strategies to improve quality of healthcare services. The findings showed that strategic interventions in quality

improvement are driven by systems, resources and people. Crafting of an organisation's vision and mission are among the key drivers in the implementation of quality improvement strategies.

It was also noted that implementation of service delivery charters at departmental level enhanced commitment to ensure effective provision of health care services. Based on the findings, it can be presumed that improving quality of care services in resource poor settings as in the case of the two national referral hospitals requires concerted efforts albeit with challenges. Some of these challenges are inadequate funds and staff. However, challenges that require attitude change can be addressed through appropriate interventions aimed at organisational transformation.

### **5.3 Recommendations from The Study**

The study has revealed important findings regarding effectiveness of quality healthcare strategies adopted by the national referral hospitals which form the basis of the study recommendations. The hospitals should adopt an integrated approach in the implementation and monitoring of various quality improvement strategies to ensure maximum results are realised in the provision of services to clients.

Up-scaling uptake ICT application in the hospitals' operations is critical since the findings of the study showed that application of ICT in service delivery played a greater role in enhancing the hospitals' process and outcome measures. Therefore, full automation of hospitals' operations is critical in improving turnaround time. A part from institutional-driven quality improvement strategies, some departments initiated their own

programmes to improve their services which were highly successful. This implies that the hospitals' management should encourage various functional units to adopt other QIPs and service delivery innovations appropriate to their functions and possibly integrate them in the institutional-driven programs.

There is also need to institutionalise training programmes on attitude change for successful implementation of the strategies. The hospitals should ensure continuous training and awareness programmes to create conducive platform to ensure successful implementation of various strategic interventions since staff attitude is one of biggest impediments to implementation of strategic interventions.

The national referral hospitals have adopted fragmented quality management systems in their operations, with some functional units using different and or a combination of various QIPs leading to a limited understanding of the causal mechanisms of interventions to improve structural, process and outcomes measures. Therefore, it is prudent to adopt an ideal model for implementation of quality healthcare strategies that is likely to maximise on the intended results at different levels of service delivery systems. The study also recommends incorporation of strategies in quality healthcare in the core-curriculum for healthcare workers in various training institutions due to limited understanding of the causal mechanisms of interventions that can be used to improve service delivery in the hospitals.

#### **5.4 Limitations of the Study**

This study was limited to two published national referral hospitals in Kenya (KNH and MTRH). However, there are other referral hospitals in various counties. The study was conducted between February and April, 2014.

## **5.5 Recommendations for Further Research**

Further study is required on appropriate strategic interventions to improve clinical outcomes. This study focused on effectiveness of various quality healthcare strategies on the hospitals' service delivery systems, which has shown varying degree of results. However, the ultimate goal of healthcare providers is to realise better clinical outcomes. Therefore, a further study is required to identify specific strategic interventions that can be used to enhance service quality and optimise clinical outcomes in public hospitals in Kenya.

## **5.6 Implication to Policy, Theory and Practice**

The Government should consider developing a policy to institutionalise adoption of QIPs in public hospitals in the country. In addition, quality management should form part of core curriculum for health workers and should be made a mandatory requirement for healthcare managers. For sustainability of this policy initiative, quality improvement programmes should be integrated in the performance management in various public hospitals. The study findings have also shown that the hospitals adopted fragmented quality management systems and the Government should consider developing national accreditation framework for both public and private hospitals to assure quality healthcare at the national and county level.



## REFERENCES

- Agbor,J.M. (2011). *The Relationship between Customer Satisfaction and Service Quality: a study of three Service sectors in Umeå*. Umeå School of Business.
- Al-Mazrou et al. (1990). *Principles and Practice of Primary Health Care*. Riyadh: Al-Helal Press.
- American Heart Association. (2000). *Measuring and Improving Quality of Care*. Journal of the American Heart Association, 101, 1483-1493.
- ASHA.(1999). *Ad Hoc Committee on Roles and Responsibilities of the School Based Speech Language Pathologist Guidelines for the Roles and Responsibilities of the School Based Speech Language Pathologist*. Rockville, MD
- Barney, J.B. (2007). *Gaining and Sustaining Competitive Advantage* (3rd ed.), Upper Saddle River, NJ: Pearson Education.
- Barouch,P.G. (2011). *Total Quality Management as a Theory of Change*. Total Quality Management & Excellence, 39, (2), 2011.
- Berenson et. al (2013). *Achieving The Potential Of Health Care Performance Measures: Timely Analysis Of Immediate Health Policy Issues*. Urban Institute
- British Columbia Medical Association (2006). *Waiting Too Long: Reducing and Better Managing. Wait Times in BC*. BCMA
- Boyce, N. (1996). *Using Outcome Data to Measure Quality in Health Care*. International Journal for Quality in Health Care.8, (2), 101-104.
- Brent, C., & James, M.D. (1989). *Quality Management for Health Care Delivery*. American Hospital Association. Chicago.
- Brook, et al.(2000). *Defining and measuring quality of care: A perspective from US researchers*. International Journal for Quality in Health Care, 12, (4), 281-295.
- Bruning, P. (2011). *Economic Challenges to Healthcare Reform: International Research Institutes Global Health Survey*.

- Burton, D. (Ed.). (2000). *Research training for social scientists: a handbook for postgraduate researchers*. London, Sage.
- Buttall et al. (2007). *Quality in Healthcare: Concepts and Practice*. Accessed on 24/07/2013 from <http://healthcarecollaboration.typepad.com>.
- Chassin, M.R. (2010). *Accountability Measures — Using Measurement to Promote: Quality Improvement*. The New England journal of medicine, 363,7.
- Chopra, et al. (2012). *Strategies to improve health coverage and narrow the equity gap in child survival, health, and nutrition*. Lancet, 380,1331-40.
- Cole, G.A. (1994). *Strategic Management: Theory and practice*. London. DP Publications.
- Consumers Health Forum of Australia. (2008). *The role of a health rights charter in improving safety and quality in health care*. Information paper
- Creel et al. (2002). *Overview of Quality of Care in Reproductive. Health: Definitions and Measurements of Quality*. P C P R B.
- Darbi,W.P.K. (2012). *Of Mission and Vision Statements and Their Potential Impact on Employee Behaviour and Attitudes: The Case of A Public But Profit-Oriented Tertiary Institution*. International Journal of Business and Social Science, 3 (14)
- Dincer et al. (2006). *The Strategic Planning Process: Evidence from Turkish Firms*. Management Research News, 29 (4), 206-219.
- Edwards, J.N., & Diana Rodin. (2012). *Using Electronic Health Records to Improve Quality and Efficiency: The Experiences of Leading Hospitals*. Commonwealth Fund.
- Elo, S., & Kyngas, H. (2008). *The qualitative content analysis process*. Journal of Advanced Nursing 62(1), 107–115. Accessed on 28/08/2013 from doi: 10.1111/j.1365-2648.2007.04569.x

Franks, O.S.W.(2009). *A Theoretical Model for Implementing Quality Management in an Automated Environment*. International Journal of Control and Automation, 2, (2)

Friedberg et al. (2010). *Paying For Performance In Primary Care: Potential Impact On Practices And Disparities*. Health Affairs, 29,(5), 926-932 accessed on 25/08/2013 from doi: 10.1377/hlthaff.2009.0985

Goldstein, S.M., Johnston,R., JoAnn Duffy, J., & Raod, J. (2002). *The service concept: the missing link in service design research?* Journal of Operations Management 20 (2002) 121–134

Government of Kenya. (2010). *Kenya Health System Assessment 2012*. Nairobi: Government printer.

Graham, I.D., & Tetroe, J. (2007). *How to translate health research knowledge into effective health care action*. Health Care Quarterly, 10(3).

Health Foundation. (2012). *Overcomingchallengesto improvingquality.Lessons from the Health Foundation’s improvement programme evaluations and relevant literature*. Health Foundation, London

Hernon,P., & Nitecki, A. (2001). *Service Quality: A Concept Not Fully Explored*. Library Trends, 49, 4: 687-708

Heuvel, J.V. (2001). *The Effectiveness of ISO 9001 and Six Sigma in Healthcare*. Beaumont Quality Publications

- Hockey, P.M., & Marshal, M.N. (2009). *Doctors and Quality Improvement*. Journal of the Royal Medicine, 102, 173-176.
- Iiminen, G.R. (2003). *Quality in Healthcare: Improving Healthcare measurement*. Accessed on 21/07/2013 from [www.asq.org](http://www.asq.org).
- International Standardization Organization. (2013). *ISO and Health: Strengthening communities for the future*. ISO Central Secretariat, Geneva.
- Jennings et al. (Ed.). (2007). *Quality Improvement: Ethical and Regulatory Issues*. The Hastings Center Garrison, New York.
- Johnson et al. (2008). *Exploring Corporate Strategy Text Cases*. (8<sup>th</sup> ed). Prentice Hall
- Kenyatta National Hospital Strategic Plan 2008-2012. KNH.
- Kimalu et al. (2004). *A review of the Health Sector in Kenya*. KIPPRA, Nairobi.
- Lally, A.M., & Fynes, B. (2006). *Articulating service concept to enhance tourism experience design authors*. Annual Conference of the Irish Academy of Management 2006. Tourism Track. Competitive Paper
- Levine, D.I., & Toffel, M.W. (2010). *Quality Management and Job Quality: How the ISO 9001 Standard for Quality Management Systems Affects Employees and Employers*. Working paper, Harvard Business School.
- McNAMARA, P. (2005). *Perspectives on Quality Quality-based payment: six case examples*. International Journal for Quality in Health Care, 17,(4), 357–362  
Accessed on 02/05/2013 from <http://intqhc.oxfordjournals.org/>.
- MEDPAC. (2004). Information Technology in health care. Report to the Congress: New Approaches in Medicare
- Ministry of Health. (2001). Wellington, New Zealand. Accessed on 20/08/2013 from [www.moh.govt.nz](http://www.moh.govt.nz).
- Moi Teaching and Referral Hospital. (2013). Accessed on 20/07/2013 from <http://www.mtrh.or.ke/index.php/about-us>.

- Mintzberg et al. (1999). *The strategy process*. Pearson Education Limited.
- Mitchell et al. (2012). *Core principles & values of effective team-based health care*. Discussion Paper, Institute of Medicine, Washington, DC. Accessed on 22/07/2013 from [www.iom.edu/tbc](http://www.iom.edu/tbc).
- Muga et al. (2005). *Overview of the Health System in Kenya*. Central Bureau of Statistics. Nairobi.
- Mugenda, O.M., & Mugenda, A.G. (1999). *Research Methods: Quantitative and Qualitative Approaches*. Nairobi: ACTS press.
- National Committee on Vital and Health Statistics. (2004). *Measuring Health Care Quality: Obstacles and Opportunities*. Accessed on 20/07/2013 from <http://docsfiles.com>.
- National Committee for Quality Health Care. (2003). *Accelerating Quality Improvement in Health Care*. Proceedings from a conference. NIHCM Foundation. Accessed on 19/07/2013 from <http://nihcm.org>.
- Nollet et al. (2005). *About Strategy and Strategies in supply chain management*. Journal of Purchasing & Supply Management, 11, 129-140.
- North Carolina Institute for Public Health. (2008). *Opportunities to Advance Quality Improvement in Public Health*. Accessed on 15/07/2013 from <http://nciph.sph.unc.edu>.
- Open Health Initiative (2012). *The Open Health Initiative to Improve Reproductive, Maternal, Newborn, and Child Health in the East African Community Partner States*. Arusha
- O'Reilly et al. (2010). *How leadership matters: The effects of leaders' alignment on strategy implementation*. The Leadership Quarterly, 21, 104-113

- Otiato, P.O. (2009). *Quality of Education and its Role in National Development: A Case study of Kenya 's Educational Reforms*. Kenya Studies Review, 1, 133-149.
- Oyaya, C.O., & Rifkin, S.B. (2003). *Health sector reforms in Kenya: an examination of district level planning*. Health Policy, 64,113-127.
- Pearce, J. A. & Robinson, R. B. (2011). *Strategic Management: Formulation, Implementation and Control*. Mc Graw Hill International. 12th Edition.
- Pereraa, P.R & Peiro´, M. (2012). *Strategic Planning in Healthcare Organizations*. Focus on: Healthcare Management (II), 65(8):749–754. Accessed on 17/10/2014 from <http://www.revespcardiol.org>.
- Plsek, P. (2003). *Complexity and the Adoption of Innovation in Health Care*. Plsek & Associates, Inc.Roswell.
- Porter, M. E. (1980). *Competitive Strategy: Techniques for Analyzing Industries and Competitors*. New York: Free Press.
- Porter, M.E. (1985). *Competitive Advantage: Creating and Sustaining Superior Performance*. New York: Free Press.
- Porter, M. E. (1980). *Competitive Strategy: Techniques for Analyzing Industries and Competitors*. New York: Free Press.
- Puga et al. (2012). *Adopting Best Practices from Team Science in a Healthcare Improvement Research Network: The Impact on Dissemination and Implementation*. Accessed on 04/08/2013 from <http://dx.doi.org>.
- Raleigh, V.S., & Foot, C. (2010). *Getting the measure of quality: Opportunities and challenges*. London: The Kings Fund.
- RAND. (2010). *International Benchmarking of Healthcare Quality*. RAND and London School of Hygiene and Tropical Medicine

- Ramirez, B. (2013). *Globalization and Health Care Systems Reform*. UCF Health Management and Informatics.
- Saunders et al. (1997). *Research Methods for Business Students*.  
Edinburgh Gate: Pearson.
- Shah, A (2013). Health Care Around the World. Global Issues. Accessed on 17/092013  
from<<http://www.globalissues.org/article/774/health-care-around-the-world>.
- Carroll, et. al. (2007). Hospital Quality Improvement: Strategies And Lessons From U.S. Hospitals. Commonwealth Fund.
- Stoney, C. (2001). *Strategic Management or Strategic Typology. A Case Study into Change within a Local U.K. Local authority*. The International Journal of Public Sector Management,14, 27- 42.
- Strite,S., & Stuart,M.E. (2005). *Fndings Gaps in Quality and Value*. The Physician Executive.
- Thompson et al. (2007). *Crafting and Executing Strategy*. McGraw-Hill Irwin.
- Tsoukatos et al. (2004). *Diagnosis and Improvement of Service Quality in the Insurance Industries of Greece and Kenya*. Lancaster University UK.  
Accessed on 22/07/2013 from <http://www.lums.co.uk/publications>.
- Turin,D.R. (2010). *Health Care Utilization in the Kenyan Health System: Challenges and Opportunities*. Accessed on 13/06/2013 from <http://www.studentpulse.com>.

- Whittington, R. (1993). *What is Strategy - And Does it Matter?* London: Routledge.
- Werner R. M., & Asch, D.A. (2007). *Clinical concerns about clinical performance measurement*. *Annals of Family Medicine*, 5,159–63.
- Werner R.M., & Asch, D.A. (2005). *The unintended consequences of publicly reporting quality information*. *Journal of the American Medical Association*, 293,1239–44.
- Wamai, R.G. (2009). *The Kenyan Health System: Analysis of the Situation and enduring challenges*. *JMAJ*, 52(2),134-140.
- WHO. (2008). *Guidance on developing quality and safety strategies with a health system approach*. Denmark
- WHO. (2003).*Quality and accreditation in health care services: A global review*.  
WHO, Geneva, Switzerland.
- WHO. (2008). *Toolkit on monitoring health systems strengthening: service delivery*.  
WHO Press, Geneva.
- WHO. (2006). *Quality of Care. A process for making strategic choices in health systems*.  
WHO Press, Geneva.
- Weiner, B.J. (2009). *A theory of organizational readiness for change*. *Implementation Science*, 4(67)
- Werner, R. M., & Asch, D.A. (2007). *Clinical concerns about clinical performance measurement*. *Annals of Family Medicine*,5,159–63.
- Werner R.M., & Asch, D.A. (2005). *The unintended consequences of publicly reporting quality information*. *Journal of the American Medical Association*, 29,1239–44.
- Wild. et al. (2012). *Common constraints and incentive problems in service delivery*.  
Working Paper 351. ODI, London.



Yarger, H.R. (2006). *Strategic theory for the 21st century: the little book on big strategy*.  
United States Government.

Zadry, H.R., & Yusof, S.M. (2006). *Total Quality Management and Theory of  
Constraints Implementation in Malaysian Automotive Suppliers: A Survey  
Result*. *Total Quality Management*, 17 ( 8), 999–1020

ZU et.al. (2008). *The evolving theory of quality management: The role of Six Sigma*.  
*Journal of Operations Management* ,26,630–650

## APPENDICES:

### i. Questionnaire

Dear Participant,

**Re: A study on effectiveness of quality health care strategies in improving services  
at the national referral hospitals in Kenya**

My name is **Douglas Odhiambo Owino**. I am a Master of Business Administration student at the University of Nairobi. I am conducting a study on effectiveness of quality health care strategies in improving services at national health referral hospitals in Kenya. I guarantee that the following conditions will be strictly observed:

- 1) Your real name will not be used at any point in the written report
- 2) Your participation in this research is voluntary; you have the right to withdraw at any point in the interview.

Thank you for agreeing to participate in this study.

**Instructions:** *Please tick {✓} where appropriate*

### SECTION I: BACKGROUND INFORMATION

1. Please indicate your department.....
2. How many staff are working in the department?.....
3. How many are medical staff?.....
4. How many are non-medical staff.....

## SECTION II: QUALITY HEALTH CARE STRATEGIES

Please select and rate the quality improvement initiatives adopted by your department

Quality Improvement Initiatives	Highly successful	Very successful	Somewhat successful	unsuccessful	Not implemented
5. Strategic Leadership Training					
6. Results-Based Financing					
7. ICT innovations					
8. Quality Management Standards and Systems					
9. Others Quality Improvement Initiatives, Please specify..... .....					

## SECTION III: EFFECTIVENESS OF QUALITY HEALTH CARE STRATEGIES

### A. Structural measures

10. How would you rate your follow-up systems?

Extremely fast [ ] Very fast [ ] Somewhat Fast [ ] Slow [ ] Very Slow [ ]

11. How would you rate your feedback to your clients?

Extremely fast [ ] Very fast [ ] Somewhat Fast [ ] Slow [ ] Very Slow [ ]

12. How would you rate the adequacy of facilities in facilitating your services?

Highly sufficient [ ] Moderate [ ] Low [ ] Insufficient [ ] Not available [ ]

**B. Process measures**

13. How would you rate time taken to admit patients in your department?

Extremely fast [ ] Very fast [ ] Somewhat Fast [ ] Slow [ ] Very Slow [ ]

14. How would you describe the time taken to attend to walk-patients in your department?

Extremely fast [ ] Very fast [ ] Somewhat Fast [ ] Slow [ ] Very Slow [ ]

15. How would you rate time take to discharge patients from the hospital?

Extremely fast [ ] Very fast [ ] Somewhat Fast [ ] Slow [ ] Very Slow [ ]

16. How would you describe the time taken to attend to internal clients in your department?

Extremely fast [ ] Very fast [ ] Somewhat Fast [ ] Slow [ ] Very Slow [ ]

17. How would you describe the time taken to attend to external clients in your department?

Extremely fast [ ] Very fast [ ] Somewhat Fast [ ] Slow [ ] Very Slow [ ]

**C. Outcome measures**

18. Please indicate the rate of re-admission of patients in your department

1-2 times [ ] 3-4 times [ ] 5-6 times 7-8 times [ ]

Others, please specify.....

19. Please indicate the average rate of mortality in the last 3 months in your department

0- 10% [ ] 11%- 20% [ ] 21% - 30% [ ] 31%-40% [ ]

Others, please specify.....

20. How would you rate clients' satisfaction with your services?

Extremely satisfied [ ] Very Satisfied [ ] Somewhat Satisfied [ ] Unsatisfied [ ]

Very Unsatisfied [ ]

21. On average, what is the length of stay of in-patients in your department?

1 day – 5days [ ] 1 week [ ] 2 weeks [ ] 3 weeks [ ] 1 month [ ]

1 month and above [ ]

22. On average, what is the waiting time to attend to clients in your department ?  
 Within 1 minute [ ] 2-10 minutes [ ] 11-30 minutes [ ] 31 minutes- 1hour [ ]  
 More than 1 hour

**SECTION IV: Critical Drivers Of Quality Health Care Strategies Implementation**

23. Do you have a departmental service delivery charter? Yes [ ] No [ ]  
 24. Do you have a departmental mission in place? Yes [ ] No [ ]  
 25. Do you have a departmental vision in place? Yes [ ] No [ ]  
 26. Do you have a departmental strategic plan? Yes [ ] No [ ]

If Yes to what extent do they help your department in improving service delivery?

	Very great extent	Great extent	Moderate Extent	Small extent	Very Small extent
27. Service delivery charter					
28. Departmental mission					
29. Departmental vision					
30. Departmental strategic plan					

**Other Critical drivers of quality health care strategies**

31. List some of the factors that facilitated the implementation of quality improvement initiatives at the Hospital

.....  
 .....  
 .....  
 .....

32. What are some of the challenges you faced in implementing the quality improvement initiatives at the hospital?

.....  
 .....  
 .....  
 .....

**Thank you for completing this questionnaire**

**ii. Informed consent form**

	<b>YES</b>	<b>NO</b>
1. I understand the implications of this study		
2. I understand that have the right to withdraw at any point in the interview		
3. I understand that data collected shall be used for purposes of this study only		
4. I have the right to seek legal redress if my rights are violated by the researcher		
5. I agree to participate in the study voluntarily		

Respondent Name..... Signature.....

Date.....

Researcher Name..... Signature.....

Date.....

### iii. Regression analysis

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.242	.530		4.226	.000
	Rate Strategic Leadership	-.178	.140	-.244	-1.274	.207
	Rate Results Based	.151	.144	.178	1.055	.296
	Rate ICT	-.032	.148	-.035	-.217	.829
	Rate Quality Management	.438	.149	.559	2.929	.005
	Rate other Quality	-.098	.094	-.122	-1.044	.300

a. Dependent Variable: How would you rate follow up systems in your department

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.507	.501		3.010	.004
	Rate Strategic Leadership	-.043	.132	-.060	-.323	.748
	Rate Results Based	-.057	.135	-.069	-.421	.675
	Rate ICT	.169	.140	.189	1.211	.231
	Rate Quality Management	.344	.141	.453	2.437	.018
	Rate other Quality	.023	.088	.029	.256	.799

a. Dependent Variable: How would you rate feedback to your clients

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.576	.907		3.942	.000
	Rate Strategic Leadership	.038	.239	.033	.158	.875
	Rate Results Based	.084	.246	.063	.341	.734
	Rate ICT	.240	.254	.167	.946	.348
	Rate Quality Management	-.201	.256	-.166	-.787	.434
	Rate other Quality	-.207	.160	-.167	-1.293	.201

a. Dependent Variable: How would you rate time taken to admit patients

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.259	.988		3.300	.002
	Rate Strategic Leadership	.267	.256	.222	1.041	.302
	Rate Results Based	-.164	.263	-.117	-.624	.535
	Rate ICT	.350	.286	.225	1.226	.225
	Rate Quality Management	-.284	.281	-.220	-1.012	.316
	Rate other Quality	-.110	.173	-.083	-.635	.528

a. Dependent Variable: How would describe time taken to attend to walk in patients



**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.447	.715		4.818	.000
	Rate Strategic Leadership	-.013	.189	-.013	-.068	.946
	Rate Results Based	-.041	.194	-.036	-.210	.835
	Rate ICT	.611	.200	.504	3.058	.003
	Rate Quality Management	-.216	.202	-.210	-1.072	.288
	Rate other Quality	-.161	.126	-.153	-1.276	.207

a. Dependent Variable: How would rate time taken to discharge patients

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.456	1.195		2.055	.044
	Rate Strategic Leadership	-.010	.315	-.007	-.033	.974
	Rate Results Based	-.135	.323	-.079	-.419	.677
	Rate ICT	.445	.334	.239	1.333	.187
	Rate Quality Management	-.230	.337	-.146	-.683	.497
	Rate other Quality	.008	.211	.005	.036	.971

a. Dependent Variable: Indicate the rate of readmission within six months in your departemnt

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.759	1.162		1.514	.135
	Rate Strategic Leadership	-.056	.306	-.037	-.182	.856
	Rate Results Based	-.073	.314	-.042	-.233	.816
	Rate ICT	.844	.325	.445	2.598	.012
	Rate Quality Management	-.307	.327	-.191	-.939	.351
	Rate other Quality	-.092	.205	-.056	-.448	.656

a. Dependent Variable: Indicate the average rate of mortality in the last three months

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.065	1.120		2.737	.008
	Rate Strategic Leadership	.435	.295	.306	1.475	.145
	Rate Results Based	-.368	.303	-.221	-1.214	.229
	Rate ICT	.375	.313	.208	1.197	.236
	Rate Quality Management	-.520	.316	-.340	-1.646	.105
	Rate other Quality	-.175	.198	-.112	-.884	.380

a. Dependent Variable: Indicate average rate of infection in the last three months in your department

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.323	.618		2.141	.036
	Rate Strategic Leadership	-.183	.163	-.220	-1.126	.265
	Rate Results Based	.362	.167	.372	2.164	.034
	Rate ICT	-.005	.173	-.005	-.032	.975
	Rate Quality Management	.256	.174	.287	1.471	.146
	Rate other Quality	.030	.109	.033	.275	.784

a. Dependent Variable: How would you rate clients' satisfaction in your department

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.309	1.387		2.386	.020
	Rate Strategic Leadership	-.167	.365	-.098	-.457	.650
	Rate Results Based	.084	.375	.042	.223	.824
	Rate ICT	.246	.388	.114	.634	.529
	Rate Quality Management	.141	.391	.078	.362	.719
	Rate other Quality	-.069	.245	-.037	-.283	.778

a. Dependent Variable: What is the average length of in-patients in your departments

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.629	.729		6.350	.000
	Rate Strategic Leadership	-.183	.192	-.187	-.955	.343
	Rate Results Based	.175	.197	.152	.886	.379
	Rate ICT	-.435	.204	-.349	-2.134	.037
	Rate Quality Management	.595	.205	.564	2.898	.005
	Rate other Quality	.133	.129	.123	1.034	.305

a. Dependent Variable: How would you describe time taken to attend to internal clients

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.589	.712		6.446	.000
	Rate Strategic Leadership	-.192	.188	-.200	-1.024	.310
	Rate Results Based	.166	.193	.148	.862	.392
	Rate ICT	-.404	.199	-.332	-2.033	.046
	Rate Quality Management	.585	.201	.567	2.917	.005
	Rate other Quality	.143	.126	.135	1.135	.261

a. Dependent Variable: How would you describe time taken to attend to external clients

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.659	.731		6.372	.000
	Rate Strategic Leadership	-.162	.193	-.165	-.842	.403
	Rate Results Based	.160	.198	.139	.809	.422
	Rate ICT	-.440	.204	-.353	-2.154	.035
	Rate Quality Management	.580	.206	.550	2.815	.007
	Rate other Quality	.136	.129	.126	1.050	.298

a. Dependent Variable: On average, what is the length of waiting time for clients to be served

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.323	.618		2.141	.036
	Rate Strategic Leadership	-.183	.163	-.220	-1.126	.265
	Rate Results Based	.362	.167	.372	2.164	.034
	Rate ICT	-.005	.173	-.005	-.032	.975
	Rate Quality Management	.256	.174	.287	1.471	.146
	Rate other Quality	.030	.109	.033	.275	.784

a. Dependent Variable: How would you rate clients' satisfaction in your department