ASSESSMENT OF STRATEGIC HEALTHCARE SERVICES ADOPTED BY COUNTY GOVERNMENTS IN SERVICE DELIVERY IN LEVEL 3 AND 4 PUBLIC HEALTH FACILITIES IN LAIKIPIA COUNTY

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DECLARATION AND RECOMMENDATION

Declaration by Student

I declare that this thesis is my original work and has not been presented for a degree or any other award in any other university

Sign……..... Date……...

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Recommendation

We confirm that the work reported in this thesis was carried out by the candidate under our supervision

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DEDICATION

This work is dedicated to my wonderful and supportive family especially my parents, my siblings and daughter Jewel Nang'asu.

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ABSTRACT

Hospitals have a central role in provision of affordable and quality healthcare to citizens. However, as the government of Kenya is making efforts to support this aim, Laikipia County is struggling to achieve this objective. The purpose of the study was to assess the strategic healthcare services adopted by County governments in service delivery in level 3 and 4 public health facilities in Laikipia county. The objectives were to establish the influence of strategic resource allocation, human resource development, procurement process, and information technology adoption by Laikipia County Government on service delivery in level 3 and 4 public health facilities. The sampled population was 74 medical practitioners who were doctors, nurses, pharmacists, lab technicians, radiologists, teaching staff, and administration staff. A descriptive survey design was adopted for the study. Primary data was collected through questionnaires. A pilot study was conducted in Naivasha County. The results on pre-test were subjected to validity checks and reliability tests. Data analysis was done using tools in the SPSS version 25. The analysis involved computation of descriptive statistics such as frequencies, percentages, means, and inferential statistics such as Pearson Correlation and regression analysis. The data was then presented in tables and narrations. The study established that that though there were resources enough to obtain various medical supplies, there was a gap in ensuring that departments got all the requirements they were in need of. The study recommended that there should be clear resource tracking within the departments.

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ABBREVIATIONS AND ACRONYMS

USA	United States of America
eMR/her	Electronic Medical or Health Records
HIGDA	Health Informatics Governance and Data Analytics
HMOs	Health Management Officers
ICT	Information and Communication Technologies
SDG	Sustainable Development Goal
SHRM	Strategic Human Resource Management
UHC	Universal Health Coverage
WHO	World Health Organization

CHAPTER ONE

INTRODUCTION

1.1 Background of the study

Achieving universal health coverage (UHC) is essential to delivering quality health services. Universal health coverage, as enshrined in the Sustainable Development Goals (SDGs), seeks to ensure health protection and general access to basic consideration administrations without monetary hardship for individuals, families, and networks, in this way permitting a change to increasingly productive and comprehensive social orders and economies. Consequently, the nature of care supports and is significant for UHC inclusion. This is because, when health quality isn't ensured, why bother enlarging the capacity of the healthcare? Access without consistency can be viewed as an unfilled guarantee of UHC. The need to provide quality healthcare is the reason why nations should make sure that governments employ adequate strategic healthcare services (World Bank, 2018).

1.1.1 Strategic Health Services

The consistency of medical services rendered by rival public hospitals is the patients' primary factor when deciding the selection for treatment of a specific hospital. The 58th gathering of the World Health Organization [WHO] in 2005 encouraged affiliate nations to seek and provide UHC to citizens based on equality and cohesion values. Universal health coverage (UHC) had subsequently picked up fame as a worldwide wellbeing objective. Part of the states of the United Nations (UN) supported UHC in 2012 goals and

in 2015, they embraced it as the Sustainable Development Target (SDG). UHC entails access to safe, reliable, comprehensive essential healthcare services, including affordable vital drugs and vaccines for all without falling into poverty.

In advanced economies such as America, the government has been struggling a lot on cost expenditure on healthcare; insufficient preventive services innovations (Covid 19) epidemic; and insufficient insurance covers for all classes of citizens (Papanicolas et al., 2019; Boudreau, 2017; Osborn et al., 2016). In Europe, the universal health system has had issues such as high fragmentation of health system; high costs of premiums paid even when there are no claims made for a lengthy period; the disparity between unfulfilled medical care needs by the income group, inefficiencies in timely delivery of health services; low allocation of health care funds in the European nations' budget projections (Cherny et al., 2016). In Asia there have been drawbacks such as legal assurance unclear clauses on compensations to members; risk pulling shortcomings like excessive claims in one move; lack of sufficient finances allocation in the national budget in a country such as Nepal (Deloitte, 2019; Ranabhat et al., 2019). In a country like Indonesia, health schemes have been causing the national budget to experience budget deficits causing reduced margins at the hospital's catty due to unavailability of funds (World Health Organization, 2019b).

Kenya, alongside other member states of the United Nations (UN), is working for universal health coverage around the world by the year 2030. UHC is defined according to the WHO, as the right of individuals to get the health services they require without monetary issues. To further break it down, this guarantees citizens and networks could

utilize the instructive, protective, therapeutic, remedial, and comforting health management they require (KEMRI, 2019). Given that the Kenya Vision 2030 planned to transform Kenya into a industrializing center salary nation giving all its people a high quality of life by 2030, UHC is crucial. Kenya's government has introduced the (UHC) pilot program known as Afya Care – Wema Wa Mkenya, which has empowered Kenyans to access affordable healthcare without financial difficulties. The County Governments in Kenya have placed it at the center of the implementation of the UHC programs.

1.1.2 Quality Healthcare

Healthcare quality was the degree to which desired health outcomes were enhanced by healthcare services given to patients and patient populations (World Health Organization, 2018). To do this, health care needed to be protected, powerful, convenient, secure, equal, and personalized. Customer satisfaction was the most important metric for determining a service provider's quality of service the customer provides. Positive customer feedback contributed to goodwill on the market for service providers, which implicitly enhanced their sector, while negative feedback shrunk the market (Gupta & Rokade, 2016). WHO (2018) agreed with guidelines that health authorities could establish a clear national agenda to advance the superiority of health amenities and set frameworks for measuring progress.

Important aspects of quality healthcare delivery included patient and provider care; medicinal effectiveness lacking protective or unnecessary practices; patient-centricity; well-organized, unbiased, and apt services. Due to its high broad scope, healthcare was becoming the world's largest expanding market, offering amenities and investment by

both government and non-government entities. Health care service delivery differed from one place to another globally. Approximately in advanced nations, except America, had UHC (Shah, 2011). Indicators of the overall performance rating for national health systems and health care quality varied from country to country. It was also a challenge to compare cross-national data, and efforts were being made to advance and authenticate eminent pointers that could be utilized globally (Rand Corporation, 2010).

Health services quality was sufficiently high towards improving the health of those receiving services and the protection of financial risks and ensured that health costs did not put people at risk for financial distress. Universal Health Coverage (UHC) had two basic objectives: to improve health impacts and to eradicate or minimize impoverishment and poverty due to the cost of health care (WHO, 2018). As referenced in the International Covenant on Economic, Social and Cultural Rights Article 12.1, the Universal Declaration of Human Rights expressed that everybody had the privilege to a well-being reasonable way of life, including clinical consideration, with the goal that State parties ought to find a way to accomplish full acknowledgment of this right.

WHO (2018) and UNICEF (2016) figures suggested that 830 mothers and 16,000 children in low-income settings died of preventable and treatable diseases every day. This is because they were unable to receive necessary healthcare. As a feature of the sustainable development goals somewhere in the range of 2016 and 2030, the objective was to ensure children who died when being given birth remained below 70 in every 100,000 births. Universal health coverage was a strategy put in place, and these global statistics were hoped to be reduced.

Risk factors were defined as those associated with ill health, injury, illness, or death. Several factors affected health and wellbeing. The WHO (2018) report indicated that that universal healthcare inclusion was the absolute most influential idea that general wellbeing brought to the table. Every nation had each current health system and promoted reform of the health care system in different ways, with the process being non-uniform towards UHC. Universal health coverage was introduced by some developing countries such as India and Thailand. They had learnt some lessons from the early results of the change, while some developing countries like Indonesia and the Philippines had moved in the direction. The progress was related to strategic responses in these countries (Fuady, 2013).

1.1.3 Strategic Healthcare Services and Quality Healthcare

Health care services were identified as all the equipment, employees, amenities, finances, and everything at the dispense of health care. Health care had long been a rare resource hence huge demand (Ransom & Olsson, 2016). The outright establishment of clinical benefit methodology was to set up on the idea of public government assistance as the basic role of clinical benefit. In healthcare clinics, the board's essential target was to furnish patients with protected, successful, and legitimate clinical consideration. The needs of patients were different. Hospital service policy needed to define successive medical service levels. Some of the strategic healthcare practices carried out to enhance service delivery in hospitals included resource allocation, human resource development, procurement process or procedures, and information technology adoption.

Health care resource allocation was the process by which money came from the government that received health care funds to organizations that managed, procured, and/or provided health care on patients' behalf. The allocation of resources was distinct from buying, which referred to the transfer of money to those charged with the responsibility of delivering or providing services (Buck & Dixon, 2013). Strategic health care resource allocation in developed countries such as England, German, and Sweden had at least two main goals in guiding resource allocation. These were performance and equity. They were however recognized and given different priorities in different jurisdictions. Where health services frameworks were exceptionally decentralized, people making decisions were most likely unable to set financial plans and designate assets legitimately. Rather, they could need to depend on increasingly verifiable strategies to impact the general assignment design.

Sales et al. (2013) in Brazil observed that the recruitment of health care workers was partly a technical process and therefore involved skills in human resource planning, education, and management. According to Zhao et al. (2013), the effect of development aid for HRH growth was maximized in settings where external support was still needed by more targeted targeting. This meant that the UHC effectiveness was entirely dependent on the quality of strategic human resource responses adopted by the health sector. In Indonesia, Padilha et al. (2013) documented that the success of the UHC was largely attributed to the human resource strategies employed by the health sector. Similarly, Tangcharoensathien et al. (2013) in Thailand also attributed the success of UHC to strategic human resource responses. In Mexico, Campbell et al. (2013) pointed out that UHC's performance stemed from exertions to advance the health workforce's

convenience, approachability, suitability, and efficiency, with resulting health outcomes improved. Several success stories across Africa had demonstrated the critical purpose of human resources in the promotion of efficiency in the health sector. For instance, a study by Badr et al. (2013) in Sudan and Kingue et al. (2013) in Cameroon found out that health workers strategic planning positively contributed towards the achievement of health sector objectives.

According to Honda (2015) and Milan and McIntyre (2016), in South Africa, observed that the purchasing role of healthcare financing comprised sets of decisions. These were defining the treatments or services to be purchased; taking into account patient needs, national health goals, and cost-effectiveness; selecting service providers, taking into account quality of service, performance and equity; and determining how services are to be provided including contractual arrangements and payment systems for providers. Buyers and health resource suppliers needed to be "governable" to facilitate strategic buying. Governability meant that the degree to which buyers and providers could be directed to meet system-wide objectives identified by health officials, and progress towards UHC in particular. The structure of a purchasing market and the stakeholders involved vary from one country to another (WHO, 2019). The government needed therefore, to establish clear structures for consumers and suppliers; addressing infrastructure gaps in service delivery; ensuring sufficient mobilized resources to meet service entitlements; and ensuring customers are accountable.

The KEMRI (2019) report recommended that, if Kenya was to achieve its Vision 2030 efficiently, the government was moving away from passive purchases and following

proactive procurement strategies for enhancing the equity, performance, and quality of health care provision. This meant that purchasing-related strategies needed to be put in place. However, it remained unclear which strategies had been put in place at the county level. Another strategic response employed by successful regimes was the use of information technology-oriented strategies. According to the WHO (2019), e-Health was the financially savvy and safe utilization of ICTs on the side of wellbeing and wellbeing-related zones. It involved various technologies, including telehealth, telemedicine, mobile health (mHealth), electronic health or health records (eMR / EHR), analytics, wearable devices, and even machine intelligence. The role of eHealth in achieving overarching health purposes like UHC and the Sustainable Development Goals (SDGs) had been recognized as crucial.

The World Health Organization (WHO) released its draft Global Digital Health Strategy, which positioned e-health programs and better use of ICT at the core of ensuring sustainable and equitable availability to care. It would only be possible to achieve UHC by 2030 if we built a collaborative environment that woul make the private sector and governments a major part of the digital transformation (World Economic Forum, 2019). In Kenya, the study by USAID (2019) indicated that counties benefiting from USAID-Health Informatics Governance and Data Analytics (HIGDA) had stepped up the use of technological innovations and products as Kenya gears for universal health coverage.

Healthcare services were delivered in Kenya through some kind of country-wide system of more than 4,700 human services offices. General health framework comprised national referral emergency clinics, provincial general medical clinics, network clinics, clinical

focuses, and dispensaries. Simply over half (24 million) of Kenyans did not approach hospitals and a third (14 million) of Kenyans were not shielded from the unfriendly impacts of cash-based medicinal services installments in 2013. The pattern kept on declining a seemingly endless amount of time after year. Subsequently, Kenya was halfway alongside its 2014 UHC mission (52 percent) and still had far to go to accomplishing 100 percent populace inclusion for both required medicinal services administrations and money-related hazard the board components. The circumstance stayed unchanged and hence was affecting the nation. Therefore, this examination centered around Laikipia County in establishing the reality of UHC in the region.

Article 12 of The International Covenant on Economic, Social, and Cultural Rights (ICESR) recognized the right of all to experience the greatest physical and mental health standards. The Vision 2030 social cornerstone, too, and a variety of policy papers included a roadmap for providing quality emergency health services for everyone. Besides, numerous regulatory mechanisms sought to streamline health services pricing, efficiency, and competitiveness. These included pricing and conducting guidelines from the oversight bodies such as the Kenya Medical Practitioners and Dentists' Board [KMPDB], Clinical Officers' Council, National Nurses Association of Kenya [COCNNAK], National Nurses Association of Kenya [NNAK] and the Ministry of Health inter alia (Kenya Medical Practitioners' and Dentists' Board, 2016).

1.1.4 Laikipia County

In Kenya, the burden of health conditions, illness, deprivation, hunger, and death laid most heavily with the most disadvantaged people who were least able to afford health

care and preventive action. In that case, an important component of any health system was then emergency care. Sadly, however, in this county, healthcare was overlooked, or not taken seriously. One of the 47 Counties facing these problems was Laikipia County. Two district hospitals served the county-one in the town of Nanyuki and the other in the town of Nyahururu. There were 56 hospitals, 8 community centers, 9 medical clinics, and 2 nursing homes in major cities and suburbs, among others. The study was conducted in the main hospitals owing to raised concerns of quality of healthcare over the last 3 years. This was pointed out in a study by Wanyama (2012) who cited the existence of issues such as inadequate resources and demoralized employees.

In a mission to offer quality vital human services benefits, the national government held just six level types of hospitals. These were the National Spinal Injury Hospital in Nairobi, Eldoret's Moi Teaching and Referral Hospital, and Kenyatta National Hospital's primary referral center. In level 1, there were community health facilities while in level 2 were Medical Clinics. Level 3 were health centers while in level 4 were full hospitals. Level 5 were county referral hospitals and national referral facilities fell under level 6.

1.2 Statement of the Problem

The ideal situation was that hospitals were expected to provide affordable healthcare services, which were of good quality. However, across the country, there were reports of poor healthcare and the inability of patients to access affordable healthcare services. There were incidences of lack of resources in most of the facilities (Lobelo et al., 2014). For instance, the shortage of drugs supplied by medical facilities in the country for nearly

a year was a result of the debt of Sh285 million which KEMSA had withdrawn from the debt supply of drugs hence accruing since 2014 (Mueni, 2019).

Inadequate expertise and skills had also been attributed to the provision of poor-quality care, exacerbated by wider program deficiencies and low staff numbers. In the year 2015, an acute drug shortage hit various public hospitals and other health facilities in Laikipia county forcing patients to opt for private hospitals. This was after the county government failed to supply the drugs to the institutions for the last three months. There was a fair mix of public, faith-based, and private health facilities in Laikipia County. However, there were significant challenges to access drawn from physical, financial, cultural, and service barriers. The superiority of healthcare amenities provided by the medical centers remained unimpressive (Kenya National Commission on Human Rights, 2018).

While much had been written about problems related to resource allocation in medicine, there had been less debate about how resource allocation influenced public health. Previous studies such as Mutua et al. (2011) stated that the provision of public health services in hospitals lacked priority. This priority could be enjoyed concerning the dedication of worker; the availability of necessary materials and equipment technology; and communication networks that translated into other delivery of health services. These situations brought to perspective question as to how the strategic healthcare services adopted by Laikipia County influenced service delivery in public hospitals.

Other previous studies by Mutui (2006), Mayoli (2008), and Mwenda (2012) had investigated the influence of government initiatives on the provision of health services, community involvement, and provision of public health services and the prospects on the

sustainability of community health strategy respectively in Kenya. However, there had been no study established to examine the influence of strategic healthcare services adopted by Laikipia County on service delivery in public hospitals. This created a gap that this study sought to know what influence existed.

1.3 Purpose of the Study

The purpose of the study was to assess the strategic healthcare services adopted by county governments in service delivery in level 3 and 4 public health facilities in Laikipia county.

1.4 Specific Objectives

The study sought to address the following research questions.

1. To establish the influence of strategic resource allocation by Laikipia County Government on service delivery in level 3 and 4 public health facilities.
2. To determine how strategic human resource development by Laikipia County Government on service delivery in level 3 and 4 public health facilities.
3. To find out whether the strategic procurement process or procedures used by Laikipia County Government on service delivery in level 3 and 4 public health facilities.
4. To examine the strategic information technology adoption by Laikipia County Government on service delivery in level 3 and 4 public health facilities

1.5 Research Hypothesis

The study sought to test the following research hypothesis:

Ho1: Strategic resource allocation by Laikipia County did not have a statistically significant influence on service delivery in level 3 and 4 public health facilities

Ho2: Strategic human resource development by Laikipia County did not have a statistically significant influence on service delivery in level 3 and 4 public health facilities.

Ho3: Strategic procurement process or procedures by Laikipia County did not have a statistically significant influence on service delivery in level 3 and 4 public health facilities.

Ho4: Strategic information technology adoption by Laikipia County did not have a statistically significant influence on service delivery in level 3 and 4 public health facilities.

1.6 Significance of the Study

The information generated from this study would assist in addressing issues relating to the influence of strategic healthcare services adopted by Laikipia County on service delivery in level 3 and 4 public health facilities in the following areas: Policymakers would be given value-added information to allow map strategies sensitive to changing external environments and quality of healthcare. Managers associated with system usage would profit from the examination by picking up knowledge on the adjustments in unique business conditions and proper key reactions in the wellbeing area. It would likewise perceive issues related to key reactions to changing outside market conditions.

Developers of policies would utilize the examination to make policies that improved the medical clinics' condition to upgrade the entrance and arrangement of value wellbeing to

all the residents. The scholastics and scientists from Laikipia County in the field of key administration and condition in the wellbeing division. They would utilize the report as a kind of perspective source and shape their latent capacity to look into subjects and studies. In different regions, the wellbeing area would pick up data on changes in the dynamic condition realized by key human services administrations and difficulties in adjusting to the evolving atmosphere, especially in the segment.

1.7 Scope of the Study

The examination was done at the Laikipia County level 3 and 4 general hospitals among the staff and the group of experts keeping an eye on the hospitals. The senior administration comprised a clinic supervisory group that held administrative control inside the medical clinic condition. This incorporated people answerable for nursing, organization, drug store, and partnered human services, and was for the most part driven by the clinical administrator. The determination of these classes of people was educated by the way that they were in a vital situation to provide data. The restriction of this examination was on inspection of the human resource systems, key buying techniques, and data innovation procedures utilized by the Laikipia County Government in accomplishing universal health inclusion.

1.8 Limitations of the Study

The study was carried out in Laikipia County. This was an area characterized with distinct operational characteristics. Moreover, the intensity of healthcare work tended to vary from county to county. Therefore, the findings did not generally apply to other counties in Kenya. However, it was possible to generalize the selected aspects of the

study but cautiously. Information solicited in the study was personal information and thus the respondent could decide not to provide honest responses. To resolve this, the researcher-maintained confidentiality for the respondents and inform them that the research was conducted purely for academic purposes.

1.9 Assumptions of the Study

The assumptions of the study were that the research participants would provide honest answers to the questionnaires and interview schedules that would allow the researcher to achieve the study's objectives; The respondents were aware of strategic healthcare services adopted by Laikipia County; and the County Government Health Directorate allowed the researcher permission to move around the school and fill the observation checklist.

1.10 Definition of Terms

Human Resources for Health

Referred to all individuals involved in the delivery of health care, including private practitioners and organizations related to health; personnel employed in units offering health or related assistance to persons with disabilities; health sector administration employees; health data framework; and health service staff delivering health items (Musyoka et al., 2016).

Level 3 and 4 hospitals

These are hospitals that include health centers and sub-county hospitals respectively (MOH, 2017).

Strategic Human Resource Development

Referred to a purposeful process of building people's skills and abilities through the development of talent, leadership development, employee development, performance development, and training/development processes to allow the hospital maintain its activities (Gok & Altindag, 2014).

Strategic Resource Allocation

Referred to the diligent deployment of hospital resources onto tasks for the achievement of set hospital objectives. Also, the procedure of distributing scarce assets among the different undertakings or specialty units (Health Foundation, 2012).

Strategic Information Technology

This referred to the use of computerized systems to administer various operations of the hospitals more effectively and efficiently (Health Foundation, 2012).

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter was a presentation of the past studies. This was both empirical and theoretical concerning the influence of strategic healthcare services adopted on service delivery in public hospitals. The literature was presented chronologically and thematically according to this study's objectives. The chapter also contained the theoretical and conceptual frameworks.

2.1 Theoretical Framework

This study was supported by the resource-based and human capital theories.

2.1.1 Resource Based Theory

The resource-based theory was postulated by Barney in 1991. It guided the strategic resource allocation and strategic procurement variables of the study. At the organizational level, the theory was used to examine the relationships between materials; competitiveness; productivity within the scrutiny of successful replication; and the suitability of earnings to innovation. These contributions together contributed to what has been dubbed "the company's resource-based view." However, the consequences for strategic management of this "resource-based theory" remained vague for two reasons. First, there was a lack of a common integrative structure for the different contributions. Second, there was very little attempt to establish the practical consequences of this theory. This theory suggested a resource-based strategy formulation approach that

incorporated a range of key principles drawn from the strategic planning literature. The process included a five-stage strategy creation process; the analysis of the company's resource base; the evaluation of the company's capacities; the analysis of the company's revenue-earning potential; the choice of a strategy and the development and enhancement of the company's resource and performance reservoir (Rumelt, 1984).

The theory was pertinent to this investigation in that county governments needed to get involved in securing and procurement of new and additional resources for the enhancement of service delivery in hospitals. The theory supported the fact that governments needed to employ these resource-oriented strategies to make better use of and maximize, existing resources. Strategies such as strategic resource allocation and human resource development were arguably ideal for this aim according to this theory.

2.1.2 Human Capital Theory (HCT)

Human capital theory-guided strategic human resource development and strategic information technology adoption variables. Originally as proposed by Becker (1962) and Rosen (1976), the theory of human capital claimed that individual employees had a collection of abilities or abilities that they could develop or acquire through education and training. The theory stated that people had natural talents, habits, and personal resources that made up the human capital (Davenport, 1999). Through HC theory, value was created by the information, skills, and abilities of the individuals. Consequently, the emphasis could be on the means to attract, retain and grow human capital. Individuals produced, retained, and utilized knowledge which created intellectual capital (Armstrong, 2010). The information on the individual was then built up by the connections between

them, for example, the social capital that made systematized information on the associations.

As per Armstrong (2010) the theory of human resources viewed individuals as resources and that associations putting resources into 20 individuals helped their profitability which in the long run delivered positive outcomes for the association. In correlation, Block (1990) contended that the meaning of human resources was an impractical notion. The theory was incapable of understanding human behavior rather than seeing it as a commodity exchange when the concept of capital employed was simply a quantitative one. It ignored the argument that capital was an autonomous social force through which value formation happens through the accumulation of resources. Humankind's capital, then, was an abstract source of labor – a commodity, not capital.

The theory was pertinent to this investigation in the following ways. The study stated that the Human Capital for Health (HRH) was a vital tool for the health sector when relating this principle to the health sector in Kenya. The theory indicated that individuals' knowledge, talents, and abilities generated interest. Consequently, the emphasis had to be on the ways to attract, pick, retain and grow human resources. Doctors, nurses, clinical staff, laboratory technicians, information technology and health professionals, and managers, have the expertise and skills that needed to be improved. This is because these skills and abilities brought value to the health sector as a whole.

2.2 Empirical Review

The study expedited various empirical review on past studies. This section was organized into various sub-sections.

2.2.1 The Concept of Service Delivery

Health was an integral part of social development over the long term. It recognized that education promotion was a social development initiative and had in itself a human interest (WHO, 2012). Moreover, the association between better quality of health and economic efficiency existed because of the contribution of health to the development as well as maintenance of human capital. According to Blas and Limbambala (2001), health was required to keep up increment on the productivity of the workforce and to permit the pre-work populace to exploit the interest in instructive offices accessible for their later accomplishment in life successfully.

Cohen and Levinthal's (1990) literature conducted in Latin America indicated that a new learning and innovation viewpoint showed that there were significant internal expenditures. In addition to the sums already spent on health, it was required to bring about tangible health change. Further contributions from the developed countries were also needed to apply them to strategic opportunities. Any effort by an international agency to help improve health conditions well into the area, ought to think about the noteworthy holes between nations. That is, as far as health markers; an interior association for tending to medical issues; the level of healthcare management; and the aberrations in the dispersion of social insurance offices among urban and rural territories.

As per Choi et al. (2008) in South Korea, shaving away at administration quality parameters and patient fulfillment relations, a cautious study was needed to sort the particular prospects that would expand outside organizations' commitment. This would be complimented by having a better management and improved proficiency in the utilization of existing resources, such as money and staff.

Jaleta (2017) examined the components influencing the planning of patient administrations in open medical clinics in Ras Desta Memorial General Hospital, Addis Ababa. The complete populace under examination were the 550 representatives of the Ras Desta Memorial General Hospital, 85 individuals had been chosen by the size equation n=N/(1+N(e)2) (Mugenda & Mugenda, 2003). Patients' administration conveyance was estimated utilizing indicators such as moderateness, openness, significance, and adequacy (quality).

2.2.2 Strategic Healthcare Services

Strategic Healthcare Services (SHS) was a strategic consultancy establishment specializing in raising profitability and provider intelligence in the area of physician-preferred cases (Ministry of Health, 2017). Speziale (2015) observed that medical care associations were confronting various difficulties because of two key factors: the expanding challenge of progressively fulfilling more patient focused services and the need to adjust their personal association to stay updated on technological advancements

Ganesh (2015) examined the efficacy of the approaches to provide quality health care and thus enhance the delivery of private hospital services. A total of 122 responses were received after the questionnaires were distributed. The study found that quality health

care policies had a beneficial effect on the delivery of services. Quality health care approaches reflected a particular kind of engagement with three quality metrics, namely structure, process, and result measurements.

A study by Agbor and Eriksson (2011) of three Service areas in Umeå showed that mediations to improve administration quality and consumer loyalty were essentially related. The discoveries by the Health Foundation report (2012) additionally showed that cooperation in administration programs catalyzed enhancements in medical clinics. The report indicated that the A team from Carmarthenshire Diabetes Network successfully transferred tedious diabetes treatment from tributary to main attention. This led to a histrionic decrease in waiting times from a year to no sitting tight for new auxiliary consideration arrangements.

2.2.3 Strategic Resource Allocation and Service Delivery in Public Hospitals

According to Milano and McTaggart (2018), strategic resource allocation ensured allocation from several different perspectives. This could be across functional areas such as accounting, human resources, logistics, and marketing. For example, a second way to determine resources was by form, physical resources, financial resources, human resources, and institutional resources. The resources could also be measured and distributed according to their tangibility. One could track and quantify measurable resources (such as a factory, or the number of employees). Less measurable resources (such as the corporate name) were also significant, although their characteristics and importance were more difficult to determine.

Mosadeghrad (2014) broke down the variables influencing the nature of human services with regards to Iran. The examination was exploratory in nature in which there was gathering of interviews from 222 medicinal services partners. These partners included human services experts, administrators, strategic managers, and payers. They were to distinguish factors that swayed the nature of social insurance administrations gave in Iranian human services associations. Most social insurance suppliers engaged with this investigation underlined that the absence of subsidizing costs, constrained the nature of human services administrations. In such a foundation it couldn't be considered patient concerns.

At its easiest, resource distribution was the component through which the accessible resources were assigned among contending uses This was not an end in itself; rather, it was a method for accomplishing a specific objective. Withanachchi et al. (2007) examined the effectiveness of resource allocation in public hospitals in Sri Lanka. The study revealed that network inefficiencies drained the minimal public health-care services allocated. The state health system in Sri Lanka was facing deteriorating budget constraints. The findings also suggested that the use of human resources was sub-optimal due to the inadequacy of the infrastructure, such as medical devices.

Pooyan et al. (2018) considered the impact of resource allotment choices on the productivity and value of UHC in 11 nations. These nations included the USA, North Africa, Greece, China, Australia, Taiwan, and South Africa. The investigation tracked down that the principal techniques for resource portion included: direct programming, Markov model, cost-viability examination, per capita resource assignment, displaying the

resource designation. However, the study did look at the influence of these resources' distribution methods on facility conveyance.

In a study in Turkey by Gok and Altındag (2014), appropriate allocation of health resources and efficient use of these facilities was considered to be critical. The assessment and proper correction of the health system seemed inevitable. This correction was possible through an examination of policies, increased efficiency, limitation of unnecessary costs, and responding to the needs of society. In a study by Bigambo (2014) it was called attention to that the issue of impartial appropriation of resources was one of the persistent problems which not only thwarted all previous efforts to find a sustainable solution but also elicited the high anxiety of all concerned. In many low-income countries, budget allocation patterns ignored changes over time in health care needs like population size and disease patterns. These health care needs restricted the ability of health care services to respond to these changes which were in turn heavily influenced by existing health service supply patterns.

In a study by Otieno (2016) in Baringo County, there was no standards or recipe for monetary asset designation; there was the slanted circulation of the HR for certain sub-areas being "supported" while others were "hindered"; and lastly there was proof of political obstruction with the dissemination of the healthcare resources. There was a disparity of both financial and human resources allocation/distribution among the sub-counties of Baringo County. It was shown that the East Pokot sub-county had the highest population, the largest land area, and the highest average distance to a facility but had the lowest per capita expenditure. This was the least healthy human resource per 100,000

population. The study also found out that due to a strong political influence on resource allocation, it would be difficult to develop equity in the distribution of resources. However, the study did not examine the influence of resource allocation on service delivery.

Mwangi (2015) inspected the connection between key management performance and administration conveyance at National Hospital Insurance Fund (NHIF). The investigation likewise presumed that asset designation had significant ramifications on the capacity and pace of key management performance. The examination presumed that there were a few difficulties looked at in the usage of key management resources at NHIF. For example, the absence of correspondence between the methodology formulators and the representatives. The examination found out that asset assignment had significant ramifications on the capacity and pace of vital management performance. The investigation along these lines suggested that the division liable for key management performance ought to be furnished with satisfactory resources since it assumes a basic job in vital arrangement usage.

Kimanzi (2014) investigated the factors impacting the arrangement of value benefits in the hospitals in Mwingi Sub County. The study used purposive sampling in the selection of 6 clinical specialists and 18 general health officials based at the sub county emergency clinic and 20 medical nurses who were chosen through simple random examination. An aggregate of 38 respondents partook in the investigation. The examination documented down that monetary administration was heavily affected by corruption hence affecting the health care in Mwingi Sub County hospitals.

2.2.4 Strategic Human Resource Development and Service Delivery (SHRM)

Hall and Purcell (2013) indicated that one of the main objectives of strategic training programs was to develop solid, competent, and professional staff whose work success could be felt in both the private and public sectors. This human capital was the center of every organization; therefore, the strength or lack of the capital was expressed in their work efficiency. According to Magiri (2009), the development of public service and the efficiency of its services offered depended solely on the efficacy of strategic training programs and clarity given to its employees. The value of using SHRM and the case of strategic employee success management, were also highlighted (Magiri, 2009).

Birhanu (2016) in Ethiopia, observed that the availability and quality of human resources; the kinds of communication between the health workers and patients; the hospitals physical facilities in providing equipment; remuneration; incentive and rewards; and the funds allocated to the hospitals, were some of the constraints of patients' health service delivery in Ethiopia. However, the study did not examine the aspect of human resource development and its influence on service delivery at the hospital.

Further on, Ngeno (2014) posited that enhancing the skills and acquaintance of workers propelled them to convey top-notch products and enterprises in the savviest way, adjusting to change and their commitment to their work by innovating in goods or processes. Employees were equipped for additional responsibilities and perceived value in strategic preparation. This helped them advance in their careers and improve their quality improvement capability.

Kimanzi (2014) observed that Kenya suffered from a professional exodus popularly known as brain drain. According to the nursing workforce, 1278 nurses left the country between 2008 and 2012 for greener pastures abroad. Between 2008 and 2012, 826 nurses left the public sector to join the private sector. Hospitals ought to actualize compelling human asset methodologies to advance the nature of administration and development; including particular enlistment and maintenance of specialists and medical caretakers; observing specialists on staff (or with benefits); and guaranteeing that they effectively satisfied certain guidelines of performance and practice to safeguard accreditations.

Akacho (2014) in a study in public hospitals in Eldoret found that the shortage of adequately trained personnel was also a major problem faced in hospitals. This is because there were fewer employees relative to the number of patients which contributed to job exhaustion. Therefore, they could not accommodate all the patients present. This meant that the staff at the facility needed additional training.

Gitonga and Keiyoro (2017) studied the problems surrounding the implementation of health care projects in Meru County under the devolved governance system. The sample size was 15, 224 medical workers employed in public hospitals, Department of Health, Meru County Government managed by the Department of Health Meru County, and 10 Administrators of healthcare civil societies chosen to engage in the study. The research was based on four theories; empowerment theory, optimal resource distribution theory, fiscal decentralization theory, and organizational theory of learning. The findings showed that the successful implementation of county-funded healthcare programs was affected by the County's allocation of health human capital.

2.2.5 Strategic Procurement Process or Procedures and Service Delivery

In a study by the Chartered Institute of Purchasing and Supply [CIPS] (2012) production capacity and technical capacity were described as factors in the operating capacity and facilities of the manufacturer, which serve as measures of his ability to meet present and future necessities of the buyer. The mechanical or hierarchical aptitude contemplations that a client needed to consider while assessing providers included: age and support of plants and gear; ability in operational regions such as building, innovativeness, structure, JIT, late customization, turn around coordination and reusing; plant productivity and Machinery for assembling things inside the resilience set by prerequisites; and the volume which the provider could deal with and create important things.

Omondi (2016) looked at the factors affecting public hospital service delivery in Nairobi County, Kenya. The exploration was directed at Kenyatta National Hospital, Mbagathi Hospital, and Mama Lucy Kibaki Hospital in Nairobi County. The outcomes demonstrated that data frameworks were not completely coordinated into systems in emergency clinics. The 96 members of the examination included 34 KNH respondents, 31 Mbagathi emergency clinic respondents, and 31 Mama Lucy Kibaki Hospital respondents. The investigation results showed that the medication supply in clinics was not adequate mostly given acquirement administrations.

At Moi Teaching and Referral Hospital, Eldoret, Kuloba (2016) investigated the effect of obtainment methodology on hierarchical achievement. The investigation tracked down no solid relationship between issuing, provider appraisal, and hierarchical effectiveness, while the material arrangement exceptionally corresponded with performance. This

implied that through issuing and material control, the firm could accomplish its destinations which would prompt hierarchical performance. The investigation set up that there was no solid relationship between issuing, provider appraisal, and authoritative performance, while material arranging was exceptionally connected with performance.

2.2.6 Strategic Information Technology Adoption and Service Delivery

Tele-nursing studies had shown an improved benefit from the use of technology in the US nursing care system. Hebda and Czar (2013) noted that the advantages of using tele-patient technology varied from better treatment and evaluation to career development and professional nurses (Hebda & Czar, 2013). Most notably, tele-nursing had contributed to clinical and healthcare improvements for better patients. Each of the benefit areas had to do with the health needs of the patients. Tele-nursing was becoming an exciting and exemplary field of nursing practice, where practitioners were expected to develop expertise in the use of technology implemented in the delivery system of patient care. In Ethiopia, an examination by Shiferaw and Zolfo (2018) saw that there was no perfect ' one size fits all ' innovation, and it was strongly suggested that joined interoperable advances be utilized by the nearby setting. Telemedicine was still in an untimely period of advancement in Ethiopia and other sub-Saharan African nations.

Ombaka (2013) looked at Kenya Power and Lighting Co Ltd's results of its diversification strategy. The study revealed that weak information management impacted the organization’s service delivery. Also, the study showed that customers took a long time to be served because of inadequate information systems. However, the study was not directed in a public medical center setting, and thus the results could not be

generalized. Musyoka, et al. (2016) concluded research on factors influencing superior facility delivery in the community health segment in Nyahururu Hospital, Kenya. In collecting data, the study utilized a descriptive survey approach. The study then used stratified random sampling to get the target population of 129 respondents. The respondents included physicians, nurses, clinical officers, laboratory technologists, and pharmacists. The study found that lack of technical innovation and information systems were major cause of poor care and thus suggested public hospitals investing in technology for improved treatment.

A study by Owino (2014) examined the efficacy of quality health care approaches in enhancing the delivery of services at Kenya's regional referral hospitals. The results revealed that the implementation of different quality healthcare approaches was successful in improving hospital services. The study established that Health care approaches such as ICT, administration practices and processes, and information system modernization had a connection to service delivery. Similar to other policy initiatives, the implementation of ICT technologies had a greater impact on follow-up processes. Strategic Leadership Training, Results-Based Financing (RBF), and specific strategic involvements at the departmental capacity had an influence on effect in improving service quality outcomes. These outcomes were rate of re-admission, average mortality rate, turn-over time to be served. Quality improvement initiatives through ICT by some departments to reduce paces of contamination showed a somewhat huge relationship contrasted with different intercessions.

Akacho (2014) examined the components that influence the conveyance of medicinal services benefits in public hospitals in Eldoret, Kenya. The examination set up that low administration correspondence influenced the degree of performance among staff as they were unconscious of their allotment and desires in the work environment. Since there was insufficient time spent between the staff and the patient, the absence of satisfactory monetary help to aid the everyday running of the clinic was a significant test. This is due to the fact that there was deficient financing for the structure of research facilities and obtainment of suitable meds for patients. The investigation uncovered that the absence of adequate clinical offices, for example, few overpopulated wards; under-capacity labs; and the absence of sufficient emergency clinics contributed incredibly to the absence of sufficient healthcare facilities. Odhiambo (2015) found that there was slow adoption of ICT in most of the hospitals in Kenya. Following the study results, Odhiambo recommended the adoption of an integrated approach to Quality Management Programmes (QIPs) and increased implementation of ICT technologies in the hospitals' operations to enhance turnaround time. However, Odhiambo's study did not show how this situation affected service delivery at the health facilities.

2.2.7 Summary of the Gaps

Even though the literature review demonstrated the significance of strategic healthcare services employed by various governments, the studies failed to relate this aspect to the provision of quality health services. For instance, a study by Milano and McTaggart (2018) on USA, North Africa, Greece, China, Australia, Taiwan, and South Africa did look at the effect of these resource allocation methods on service delivery. A study by

Mosadeghrad (2014) showed that the use of human resources was inadequate due to capital ineptitude, such as hospital equipment but does not show how the strategies employed help enhance the provision of quality healthcare services.

Concerning the influence of human resource development on the quality of health service provided, most studies left this aspect unexplored. For instance, Birhanu (2016) in Ethiopia did not examine the aspect of human resource development and its influence on service delivery at the hospital. Ngeno (2014) found that strategic training helped hospital staff progress in their careers and enhanced their capacity for continuous improvements. However, Ngeno did examine whether strategic training influences service delivery in the hospitals.

In a study by Omondi (2016) in public health institutions in Nairobi, it was found out that information systems have not been fully integrated into the hospitals' operation. However, the study did look at how these procurement setbacks influenced service delivery. Kuloba (2016) at Moi Teaching and Referral Hospital, Eldoret set up that there is no solid relationship between offering, provider evaluation, and hierarchical execution, while material arranging was profoundly connected with firms' performance. However, the study was carried out in a different county from Laikipia County with different administrative and operation environments, and thus cannot be generalized.

A study by Ombaka (2013) at Kenya Power and Lighting Co Ltd revealed that because of weak information systems consumers take considerable time to be served. However, the study was not conducted in a public hospital setting, and thus the results cannot be generalized. Ochieng (2016) in a study in Nyahururu District Hospital, Kenya,

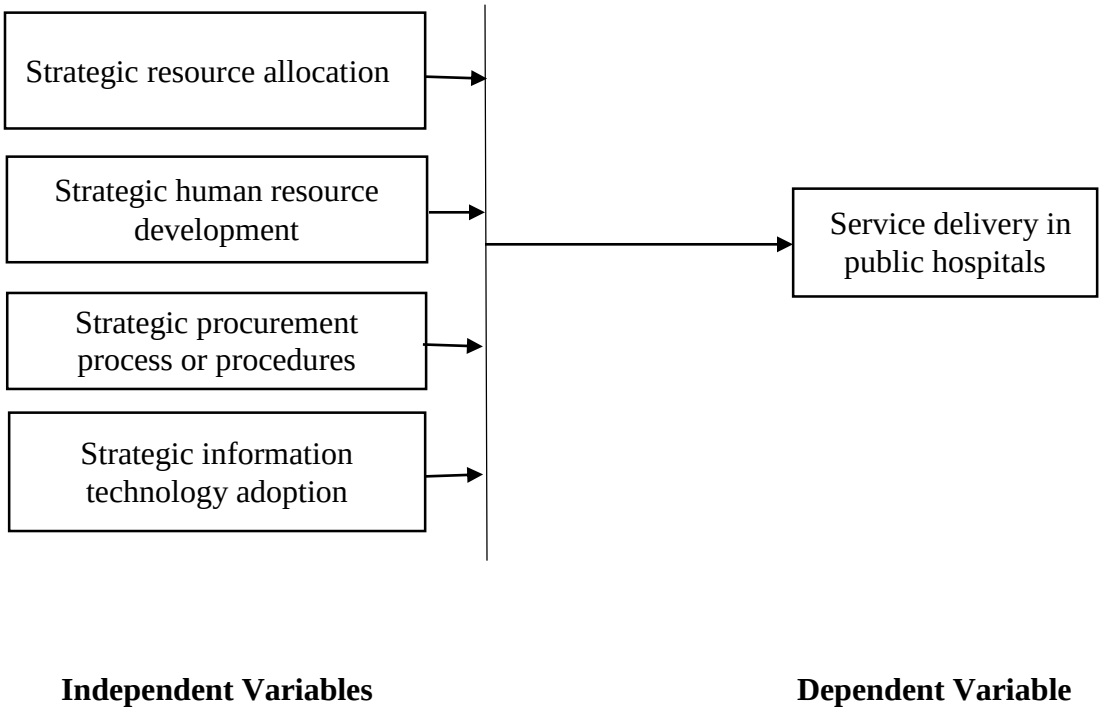
established that Lack of technological development and a lack of information system contributed to weak services. However, the study was in Nyahururu and not Laikipia County.

2.3 Conceptual Framework

This section provided a diagram of the relationship between the study's independent and dependent variables. This study conceptualized that strategic healthcare services such as strategic resource allocation, strategic human resource development, strategic procurement process or procedures, and strategic information technology adoption (independent variables) influence service delivery in public hospitals in Laikipia County. Figure 2.1 gives the conceptual framework.

Figure 2.1

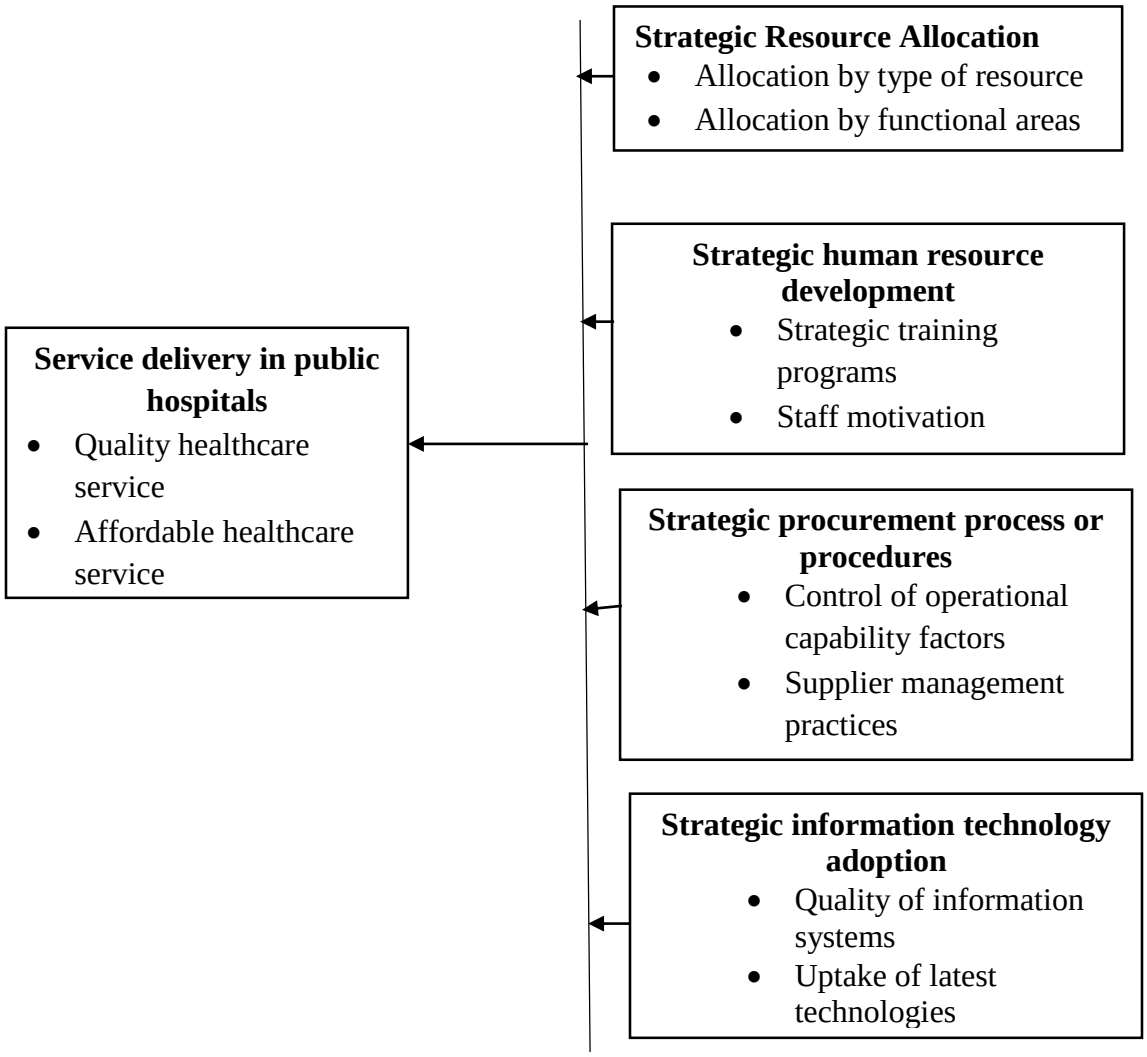
Conceptual framework



2.3.1 Operational Framework

Figure 2.2

Operational framework



As detailed in the operational framework, the dimensions for strategic resource allocation included allocation by type of resource and allocation by functional areas. The indicators for strategic human resource development included strategic training programs and staff motivation. The dimensions of strategic procurement processes or procedures included

control of operational capability factors, and supplier management practices, while those of strategic information technology adoption included the quality of information systems and uptake of latest technologies. Service Delivery in Public Hospitals was measured through the quality healthcare service and affordable healthcare service.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The chapter outlined the research design, location of the study, population of the study, sampling methods, sample size, survey instruments, and pilot study. In addition, instrument validity and reliability, data collection procedures, and data analysis concluded.

3.2 Research Philosophy

A research philosophy is elaborated as a strategy through which a study is thought as standard by extensive numeral studies in the area and in which have been proved and undertaken for lengthy period of time (Abdullah & Siti, 2019). There are two major research philosophies. They include positivism and interpretivism (Abdullah & Siti, 2019). Positivism follows a thorough theory substantiation system which relies heavily on facts and offers in depth explanations that leads to generalization (Park et al., 2020). Interpretivism entails making conclusion based on personal experiences of the respondents (Abdullah & Siti, 2019). That is, how different individuals use their human-centered qualitive approaches to a subject matter. The current study will therefore apply positivism research philosophy because the study is scientific and hence rely mostly on factual information which will be explained for generalization to be concluded (Park et al., 2020).

3.3 Research Design

A research design represented the mechanism that included the research's overall conclusions, the data collection, and the analysis system. This is the guide for performing a research report (Creswell, 2014). The study used descriptive survey design due to the (descriptive) nature of the research as well as the type of data needed (quantitative). Shuttleworth (2008) depicted this plan as a logical technique that included perception and portrayal of the conduct of a subject without influencing it in any capacity. This form of research attempted to explain things like future behavior, behaviors, values, and features. The study used quantitative data obtained through questionnaires. The descriptive survey research design enabled the study to extensively describe, analyze and examine the strategic healthcare services adopted by county governments in service delivery in level 3 and 4 public health facilities in Laikipia County. The design also allowed standardization of data and comparison.

3.4 Location of the Study

The examination was done at the Laikipia County level 3 and 4 general hospitals. A level 3 hospital was any hospital with few facilities that has at least on doctor, nurse and clinical officers (Akacho, 2014). A level 4 was any hospital that had a functioning trauma center (Akacho, 2014). The two types of hospitals were considered because in Laikipia county these two were the largest in terms of capacity and functions. The referral hospitals were many hence information was easily obtained. The county was served by 84 level 3 and 4 health facilities (Kenya National Bureau of Statistics [KNBS], 2014). The study was keen on studying facilities that had been operating for over 4 years, which is why the 2015 list of facilities was chosen.

3.5 Target Population

A target population was the number of subjects that a researcher perceived to collect data from in a study (Cooper & Schindler, 2013). There were 84 health facilities connected to an electronic medical records platform (County Government of Laikipia, 2019). This helped ensure that the target population was drawn from a relevant universe. There were around 25 doctors, 336 nursing staff, 84 pharmacists, 125 lab technicians, 25 radiologists, 20 teaching staff, and 84 administration staff. The total was 653 staff. The target population is presented in Table 3.1.

Table 3.1

Target Population

Staff	**Target Population.**
Doctors'	25
Nurses'	336
Pharmacists	84
Lab Technicians	84
Radiologists	20
Teaching Staff	20
Administration Staff	84
Total	**653**

Kenya Medical Practitioners' and Dentists' Board (2012)
National Nurses Association of Kenya (2008)

3.6 Sampling Size and Sampling Procedures

The analysis employed the technique of stratified random sampling. Stratified random sampling was an examining procedure including the parting of a populace into littler subgroups known as layers. The layers were shaped in delineated irregular examining or separation dependent on the basic qualities or attributes of the members (Mugenda & Mugenda, 2003). The technique was used to select participants from various cadres within the hospitals. In this case, the strata were doctors, nurses, pharmacists, lab technicians, and radiologists forming the management staff, teaching staff and administration staff formed the non-management staff. The sample size of this analysis was determined using a statistical method as illustrated below (Kothari, 2004).

$$n = \frac{Z^2 pqN}{e^2(N-1) + Z^2pq}$$

Where:

n = Sample size for a finite group

N= Community scale reflecting tiers 3 and 4 of the health care facilities

p = Reliability of the population (or approximate frequency for a sample size n), where p is 0.5 for all hospital workers

p + q= 1 e: The margin of error considered for this analysis is 10 per cent. Z α/2: normal reduced variable with significance z of 0.05 is 1.96

The sample size for all hospital staff is similar to the specification above and is as shown below.:

$$n = \frac{(1.96)^2 \times 0.5 \times 0.5 \times 653}{(0.1)^2 (821 -1) + [(1.96)^2 \times 0.5 \times 0.5]}$$

= 74.07186358

74 health staff

(Sample size /population size) × Stratum size

The sample Distribution Matrix is indicated in Table 3.2.

Table 3.2

Sample Distribution Matrix

Staff	**Target Population**	**% Proportion**	**Sample (% pp x 57)**
Doctors	25	3%	3
Nurses	336	41%	36
Pharmacists	84	10%	9
Lab Technicians	84	10%	9
Radiologists	20	2%	2
Teaching Staff	20	2%	2
Administration Staff	84	15%	13
Total	**653**	100%	74

Kenya Medical Practitioners' and Dentists' Board (2012)
National Nurses Association of Kenya (2008)

According to Table 3.2, the study used a sample of 3 doctors, 36 nurses, 9 pharmacists, 9 lab technicians, and 2 radiologists forming a total of 59 management staff. 2 teaching staff and 13 administration staff formed a total of 15 non-management staff. However, the combined total was 74 respondents.

3.7 Data collection procedures

The study acquired an introduction letter from Kenya Methodist University [KeMU] for the motivations behind acquainting the researcher with the respondents and the establishments concerned. The researcher utilized the university letter to apply for a license from the National Council for Science Technology and Innovation (NACOSTI) to accomplish work.).

Once the research license from NACOSTI was gotten, the researcher utilized it to get an acceptance from Laikipia County, ministry of health. The researcher showed the permit and the introduction letter to the respondents as an affirmation of the motivation behind the exploration. The researcher later gathered the information

3.8 Data Collection Instruments

The study accumulated essential information through closed-ended questionnaires. Closed-ended questionnaires which were used by all respondents would be perfect for information assortment, as they empowered the study to arrive at an expansive example inside a restricted timeframe since they did not have depth information as compared to the management category. The questionnaires that were used are indicated in appendix II.

3.8.1 Piloting of the study

A pilot study was steered in 10 percent of the study sample in Naivasha Sub County hospital amongst 5 hospital staff, as suggested by Mugenda (2008). All the 6-hospital staff was issued with closed-ended questionnaires. The senior staff were selected through the purposive sampling technique while the five staff were selected through the random

sampling technique. The aim was to notice vulnerabilities in instrument plan and instrument administration performance and to offer a substitution for a probability sample information gathering (Cooper & Schindler, 2013). The pilot research anticipated exposing shortages in the questionnaires before the concluding information was collected. The information collected was utilized to improve the quality of the investigation instruments.

3.8.2 Validity of the Study

Cooper and Schindler (2003) expressed that an instrument's validity applied to the degree to which the tool tests the intended measurement. The quality of the instruments of study should be safeguarded by various approaches. As Wiersma (1995) put it, legitimacy of substance was utilized to decide the portrayal of the things as for the investigation's objectives. The legitimacy of the instruments was surveyed by counseling college chiefs, as this type of legitimacy was not factually perceptible. The chiefs helped keep an eye on the pertinence of inquiries contained in the questionnaires and interview concerning how they addressed the investigation targets.

3.8.3 Reliability of Research Instruments

As indicated by Cooper and Schindler (2013), reliability was a proportion of how solid outcomes an examination instrument created on rehashed preliminaries. The reliability of the instruments was checked by estimating the dependability of the Cronbach Alpha coefficients utilizing the pilot study information Check Retest approach. As indicated by Kothari and Garg (2014) a relationship coefficient of > 0.7 was viewed as adequately

high to order the instruments as precise. Instruments that produced a coefficient of the relationship more noteworthy than 0.7 would be viewed as exact and could be utilized for investigation.

3.9 Data Analysis and Presentation

This part discussed the methods and procedures used in data analysis that was adopted in this study. The data was compiled and processed in electronic form using version 24 of the Statistical Package for Social Sciences (SPSS). The data analysis used both descriptive and inferential statistics. Descriptive statistics (frequencies, median, and percentages) mainly encapsulated distribution measurements, and core pattern measurements. Inferential statistics comprised of Pearson correlation and regression analysis.

As for Pearson correlation, the linear relationship between variables was used to determine the interaction between the study variables (Cooper & Schindler, 2013). The correlation coefficient (r) indicated the magnitude of the linear relationship between each of the independent variables and the dependent variable to the investigator. Multiple linear regressions assessed a linear relationship between the dependent variable and the independent variables. (Kothari & Garg, 2014). Multiple linear regressions were then conducted to assess if there was conclusive evidence to allow the researcher to evaluate the causal connection between the dependent variable and the independent variables. (Kothari & Garg, 2014).

A statistical model was built to demonstrate the independent variables' effect on the dependent variable (Kothari & Garg, 2014). To elaborate the implication of connection between strategic healthcare services (strategic resource allocation, strategic human resource development, strategic procurement process or procedures, and strategic information technology adoption) and the dependent variable (Service delivery in public hospitals) as indicated by the null hypotheses H01-H04, a multiple regression analysis was used to exemplify the degree to which strategic healthcare services influenced service delivery in public hospitals. The following regression model guided the study.

$SDPH = K + \beta 1\ SRA + \beta 2\ SHRD + \beta 3\ SPPP + \beta 4\ SITA$

Where:

SRA= Strategic Resource Allocation

SHRD = Strategic Human Resource Development

SPPP = Strategic Procurement Process or Procedures

SITA = Strategic Information Technology Adoption

SDPH = Service Delivery in Public Hospitals

K = Constant –

β= Regression coefficients

Ɛ = Error

The results of the study were offered in APA formatted tables which represented statistical results both descriptive and inferential. Qualitative information which was ready from open-ended questionnaires and interview lists was broken down utilizing topical literary investigation. This methodology included arranging and arrangement of

related subjects arising out of the reactions. The grouping was by the examination responses. The outcomes were introduced in writing structure.

3.10 Ethical Consideration

Kombo and Tromp (2006) recommend that studies whose subjects are people or creatures must legitimize playing out the exploration and focus on moral issues pertinent to playing out the examination. Moral concerns, for example, obscurity and educated assent, straightforwardness, decency, obligation in managing the physical and mental security of different respondents and research subjects, and explanation of the examination's aim were applied.

The study guaranteed that before information assortment, authorization to perform investigation was acquired from pertinent authorities. The study got composed approval from the National Council for Science Technology and Innovation (NACOSTI) to complete this examination to guarantee moral conduct during the investigation procedure. After that, the study utilized the research license to collect data. The study consistently ensured that the members were treated with the most extreme regard and that they were completely mindful of their willful investment. The members were likewise given the through and through freedom to pull back from the information assortment process whenever. The members were completely educated about the goal of the investigation and were guaranteed their privacy. Further on, the respondent’s personality was kept secret and mysterious as the data they gave. Members were not genuinely restless, since their participation was acquired intentionally. Replication of data was avoided in the

study and incase reference was made, proper citation and referencing were made adhering to APA 7th edition.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Introduction

This chapter focused on the research instruments response rate, reliability statistics demographic information of the respondents, data presentation, interpretation and discussion of findings. The presentation was done based on the research questions.

4.2 Response rate

The study had an objective of getting data from 74 public hospitals personnel. The 74 personnel were 3 doctors, 36 nurses, 9 pharmacists, 9 lab technicians and 2 radiologists forming a total of 59 management staff. 2 teaching staff and 13 administration staff formed a total of 15 non- management staffs. However, the combined total was 74 respondents. On the one hand, when the researcher issued the 74 public hospital personnel with the questionnaires, the returned ones were 64 implying that the response rate was 86%. The unanswered questionnaires were 10 representing 14%. The results are represented in Table 4.1.

Table 4.1

Response Rate on Questionnaires

Category	Frequency	Percent	Cumulative Percent
Questionnaire's response	64	86	86
Non-response	10	14	100
Total	**74**	**100**	

4.3 Reliability Statistics

To ensure that the study performed their required tasks on underpinning the objectives, the study did a pilot study on both the questionnaires and interview guides. The pilot study was conducted in Naivasha sub-county hospital. There were 5 hospital staff through which the questionnaires were tested on. The five staff were selected through random sampling technique. The results are represented in Table 4.2.

Table 4.2

Reliability Statistics

Instrument	Cronbach's Alpha	N of Items
Questionnaire	.89	5

Results from Table 4.2 indicated that the questionnaires had a Cronbach alpha coefficient of 0.89. As indicated by Kothari and Garg (2014) A relationship coefficient of more than 0.7 was viewed as adequately high to order the instruments as precise. Therefore, this research instruments produced an average coefficient of 0.89 hence they were reliable enough to be utilized for the investigation.

4.4 Demographic Information of the Respondents

At the commencement of the research instruments, the researcher was keen on introducing the questions by first knowing few demographic data of the respondents. Table 4.3 gives the demographic data of the respondents answering the questionnaires and the respondents being interviewed. Results from Table 4.3 indicated that there were

mor females than males. The number of female personnel were 36(56%) while the number was male personnel were 28(44%). This high number of female staff came mostly from the nurses and support staff. A similar finding was established by ministry of health report (2018) confirmed that it found out that nurses forming majority of hospital staff, female nurses were more as compared to male nurses.

Therefore, since in our case there were more nurses and support staff, we established that there were more female than male staff. Table 4.3 also showed that most hospital staff ages ranged between 34-48 years who were 24(38%), followed by 28-37 years who were 15(23%); followed by 18-27 years who were 13(20%); and those above 48 years came last since they were just 12(19%). Akacho (2014) derived results that were relatable to the study after establishing that most medical staff in Uasin Gishu district hospital in Eldoret were middle aged between their late 20's and early 50's.

Table 4.3

Demographic Profile of the Respondents

Gender Category	**Frequency**	**Percent**	**Cumulative Percent**
Male	28	44	44
Female	36	56	100
Total	**64**	**100**	
Age Category	**Frequency**	**Percent**	**Cumulative Percent**
18-27 years	13	20	20
28-37 years	15	23	43
38-47 years	242	38	81
48 and above	12	19	100
Total	**64**	**100**	
Job title Category	**Frequency**	**Percent**	**Cumulative Percent**
Senior manager	2	3	3
Doctor	2	3	6
Nurse	19	30	36
Pharmacist	5	7	43
Lab technician	7	11	54
Radiologists	1	2	56
Teaching staff	2	3	59
Admin staff	8	13	72
Support staff	18	28	100
Total	**64**	**100**	
Period Category	**Frequency**	**Percent**	**Cumulative Percent**
0-3 years	16	25	25
4-6 years	22	34	59
7-9 years	21	33	92
10 and above	5	8	100
Total	**64**	**100**	

Table 4.3 indicated that most of the hospital staff were nurses and support staff who we 19(30%) and 18(28%) respectively. True to these results Kenya Conference of Catholic Bishops (KCCB) report in 2014 agreed that majority of their staffs were nurses who were 2750(29.5%) and support staff who were 673(16%) of their total 9323 hospital staffs. According to Table 4.3 most of the employees had stayed in their current hospital for a period between 4-6 years who were 22(34%); they were closely followed by 7-9 years who were 21(33%). The least duration was discovered to be ten years and above who were only 5(8%). Badr et al. (2013) while considering health sector human resources in Sudan indicated that most staff had stayed in the hospital between 3-7 years. Actually, in this study 4-6 years also fell in that range.

4.5 Diagnostics Tests

This study also measured whether the collected data capacity was stable to be used in generation of regression analysis. The study assessed three tests which were multicollinearity, normality and heteroskedasticity tests.

4.5.1 Multicollinearity Test

This test had a significance of ensuring that the data collected from the variables of the study were connected to each other. That was, to check if the variables had any significant correlational values among them. To achieve this, tolerance and VIF numbers were considered. According to Becker et al. (2014), tolerance value was supposed to be above 0.2 while VIF was supposed to be below 5 to confirm that indeed there was no multicollinearity challenge between variables. The results are represented in Table 4.4

Table 4.4

Multicollinearity Test

Model	Collinearity Statistics	
	Tolerance	**VIF**
(Constant)		
Strategic resource allocation	.230	4.352
Strategic human resource development	.340	2.945
Strategic procurement process and procedures	.966	1.030
Strategic information and technology adoption	.398	2.512

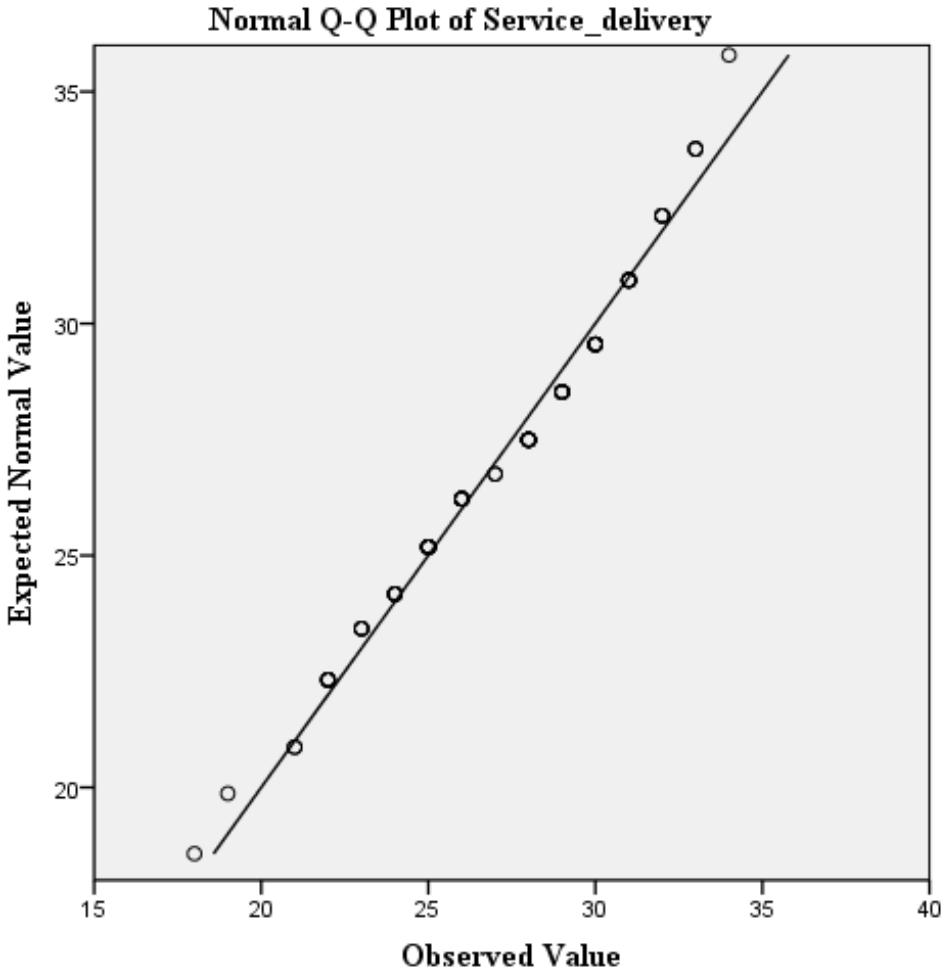
From Table 4.4, multicollinearity test generate tolerance and VIF values were all above 0.2 and below 5. That is, on strategic resource allocation tolerance level was 0.230 and VIF was 4.352; strategic human resource development tolerance level was 0.340 and VIF was 2.945; strategic procurement process and procedures tolerance level was 0.966 and VIF was 1.030; and strategic information and technology adoption was 0.398 and VIF was 2.512.

4.5.2 Normality Tests

A normality test was also conducted to know whether the data was normally distributed. The test was necessary because normality tests are used to determine if a data set is well-modeled by a normal distribution and to compute how likely it is for a random variable underlying the data set to be normally distributed.

Figure 4.1

Normal Q-Q Plot



Results in Figure 4.1 showed that there was a flow of data points close to the diagonal line and therefore, the data appeared to be normally distributed. The results are represented in the table 4.1

4.5.3 Heteroskedasticity Test

This study performed heteroskedasticity test on the variables under investigation using correlation coefficients values. The results are represented in Table 4.5.

Table 4.5

Heteroskedasticity Test

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	19.580	4.821		4.061	.620
Strategic resource allocation	.324	.425	.169	.761	.449
Strategic human resource development	.009	.241	.006	.035	.972
Strategic procurement process or procedures	.108	.101	.116	1.071	.287
Strategic information technology adoption	.545	.232	.398	2.351	.121

a. Dependent Variable: Service delivery

The results in Table 4.5 indicated that there was no heteroskedasticity problem with the variables of study since all the significant values were all greater than 0.05. Strategic resource allocation had significance level of 0.449; strategic human resource development had a significance value of 0.972 strategic procurement process or procedures had a significance value of 0.287; and strategic information technology adoption had a significance value of .121.

4.6 Influence of Strategic Resource Allocation on Service Delivery

The first objective of the study was to establish influence of strategic resource allocation by Laikipia County Government on service delivery in level 3 and 4 public health facilities. This first objective had indicators such as allocation by type of resource and allocation by functional areas. To achieve this objective, the researcher developed a questionnaire that had statements and also interview questions. In the questionnaires, the respondents were either supposed to 1-Strongly disagree, 2-disagree, 3- Neither agree nor disagree, 4- Agree and 5- Strongly agree. The results are represented in Table 4.6.

Table 4.6

Descriptive Statistics on Strategic Resource Allocation

Statements N=64	**1**	**2**	**3**	**4**	**5**	**Mean**	**Std Dev**
Our facility has adequate resources for research and development	0(0%)	0(0%)	0(0%)	10(16%)	54(84%)	**4.85**	**.36**
There are adequate finances for departmental operations at the facility	0(0%)	4(6.0%)	0(0%)	8(13%)	52(81%)	**4.68**	**.78**
Our department has enough resources to obtain requisite medical supplies	1(1%)	0(0%)	0(0%)	5(8%)	58(91%)	**4.87**	**.51**
Our department has all requisite operational equipment.	3(5%)	13(20%)	0(0%)	27(42%)	21(33%)	**4.50**	**.78**
Our department has adequate manpower for it to function well	0(0%)	3(4.7%)	1(1.3%)	16(25.0%)	44(69.0%)	**4.58**	**.75**
Average Mean						**4.69**	**0.64**

The results from Table 4.6 indicated that strategic resource allocation had an average mean of 4.69 and a standard deviation of 0.64. The most agreed statement by the hospital personnel were departments had enough resources to obtain requisite medical supplies. It had a mean of 4.87 and a standard deviation of .510. The most disagreed statement by

hospital personnel were that departments had all requisite operational equipment. It had a mean of 4.50 and a standard deviation of .784. In agreement, Etiaba et al. (2018) indicated that there was still resource allocation problem to social health insurance scheme, whereby the scheme has been suffering from shortages of funding despite funds being present.

These results indicate that though there were resources enough to obtain various medical supplies, there was a gap in ensuring that departments got all the requirements they were in need of. The researcher discovered that mis-balance between departments getting required resources in which they are dispensed to. This problem could be partly attributed to planning and strategizing by the involved departments. It could be ascertained that either the departments in need on resources were placing their orders late of poor planning. This shows that there is need to review the procurement system into which the departments submit their request into. Further on, the replacement system also seems to be challenging in that the hospitals do not have clear and concise method of replenishing their medical supplies. Monitoring and evaluation by the hospital was also greatly challenged. Since there was an issue with how frequency the operation was conducted. There is a problem of when monitoring and evaluation happens. That is why many departments were struggling with having enough quantities. The departments could have outgrown the quantities of supplies but lack of monitoring and evaluation

4.7 Influence of Strategic Human Resource Development on Service Delivery

The second objective of the study was to evaluate influence of strategic human resource development by Laikipia County Government on service delivery in level 3 and 4 public health facilities. This second objective had indicators such as strategic training programs

and staff motivation. To achieve this objective, the researcher developed a questionnaire that had statements to hospital staffs and also interview questions to senior hospital management. In the questionnaires, the respondents were either supposed to 1-Strongly disagree, 2-disagree, 3- Neither agree nor disagree, 4- Agree and 5- Strongly agree. The results are represented in Table 4.7.

Table 4.7

Descriptive Statistics on Strategic Human Resource Development

Statements N=64	**1**	**2**	**3**	**4**	**5**	**Mean**	**Std Dev**
Proper coordinated communication system between the health workers and patients	1(1%)	0(0%)	0(0%)	6(10%)	57(89%)	**4.86**	**.52**
Workers are properly remunerated	0(0%)	11(18%)	0(0%)	33(51%)	20(31%)	**3.95**	**.02**
There is a good policy of staff incentive	0(0%)	7(10.7%)	0(0%)	33(51.2%)	24(38.1%)	**4.17**	**.89**
Employees at the facility are usually prepared for increased responsibilities through training.	0(0%)	4(6.0%)	0(0%)	33(51.2%)	27(42.9%)	**4.31**	**.76**
There is careful and selective recruiting and retention of doctors and nurses	1(1.2%)	0(0%)	0(0%)	33(51.2%)	30(47.6%)	**4.45**	**.57**
Average Mean						**4.35**	**0.75**

As indicated in Table 4.7, strategic human resource development had an average of 4.35 and a standard deviation of 0.75. What really stood out among the hospital staff was that there was a properly coordinated communication system between the health workers and patients. This statement had a mean of 4.35 and a standard deviation of 0.75. There was however a disagreement that workers at the facility were properly remunerated and this motivated them. Respondents had disagreed with a mean of 3.95 and standard deviation of 1.017. Gitonga (2017) also had a similar that in Meru County was poor renumeration to health workers which was inhibiting the development of healthcare projects as required. Musyoka et al. (2016) mentioned on salary increment and promotions as some of the measures Nyahururu hospital was adopting to motivate employees in improving quality health care. Further on, Omondi (2016) complained of wide gap between public hospitals in Nairobi County and in which was affecting quality service delivery.

Demotivation of workers basically as a result of low remuneration has been a problem in the health sector for a long period. Not a year goes by without hearing medical practitioners complain about their salaries. From this study it was evident that low remuneration was a concern towards motivating medical practitioners. This was because, their jobs were riskier in nature as compared to other workers. The nature of their jobs put them into a dangerous situation from getting diseases such as HIV/AIDs and covid-19 among others. Therefore, they felt that the county government deserved to pay them more for risking their lives to help the society. In addition, these medical practitioners also worked overt-times hours and odd hours which were not similar as these other professionals. A doctor could be re-called in to work even after completing their shifts especially when accidents happened. Nurses spent more time while caring for the patients

and assisting doctors and surgeons in their operations. Therefore, they felt they were entitled to a higher pay scale to feel compensated for all these sacrificial tasks.

4.8 Influence of Strategic Procurement Process or Procedures

The third objective of the study was to measure the influence of strategic procurement process or procedures used by Laikipia County Government on service delivery in level 3 and 4 public health facilities. This third objective had indicators such as control of operational capability factors and supplier management practices. To achieve this objective, the researcher developed a questionnaire that had statements to hospital staffs and also interview questions to senior hospital management. In the questionnaires, the respondents were either supposed to 1-Strongly disagree, 2-disagree, 3- Neither agree nor disagree, 4- Agree and 5- Strongly agree. The results are represented in Table 4.8.

Table 4.8

Descriptive Statistics on Strategic Procurement Process or Procedures

Statements N=64	**1**	**2**	**3**	**4**	**5**	**Mean**	**Std Dev**
There is total adherence to the recommended tendering procedures	9(13%)	28(44%)	0(0%)	27(43%)	0(0%)	**2.73**	**.52**
All the departmental requests are replenished as per specification	5(8%)	25(39%)	1(2%)	29(45%)	4(6%)	**2.96**	**.02**
Supplies to the departments are adequate	25(41%)	12(19%)	10(16%)	8(11%)	9(13%)	**2.39**	**.89**
Supplier monitoring ensures that only supplies of good quality are procured	25(39%)	12(19%)	8(12%)	10(17%)	9(13%)	**2.45**	**.76**
There is timeliness in delivery of supplies to departments	6(8%)	25(39%)	2(4%)	29(45%)	2(4%)	**2.96**	**.57**
Average Mean						**2.69**	**0.75**

The results in Table 4.8 proved that strategic procurement process or procedures had the lowest mean of 2.69 and standard deviation of 0.75 as compared to other variables of the

study. Despite this low mean, the hospital staff agreed that all the departmental requests (equipment or supplies) were replenished as per specifications. This had a mean of 2.96 and a standard deviation of 1.017. In the same line of thoughts, the respondents did not seem to concur that supplies to the departments were adequate to meet demand. This had a mean of 2.39 and a standard deviation of .889. This generally implied that in as much as departments needs were being met, it was still not adequate to cater for all the demands in a significant way. In a review by Gupta and Rokade (2016) they stressed that health sector importance was attached to the ability of meeting all its demands. Gupta and Rokade (2016) agreed that though the demands of health sector cannot be all met, there was need to meet majority of the needs for the sector to operate efficiently.

These outcomes portray a scenario that departments were growing but resources provided did not match with their growth. This means that the hospitals lacked quality internal audit on available resources. The current audit management practices did not really go deep enough to establish what has been causes resources not to be enough. As a result, when senior management is making decision on what to increase, they are mis-guided by the audit results. The annual strategies put into place for efficiency in the hospital do not seem to reflect the current situation at hand. That is why, hospital beds did not serve the growing number of patients especially due to outbreak of diseases. In addition, lack of visionary strategic team members had also downplayed availability of enough resources. It was discovered that these strategic teams do not set aside reliable emergency resources for outbreaks of diseases.

4.9 Influence of Strategic Information Technology Adoption

The fourth objective of the study was to find out the influence of strategic information technology adoption by Laikipia County Government on service delivery in level 3 and 4 public health facilities. This objective had indicators such as quality of information systems and uptake of latest technologies. To achieve this objective, the researcher developed a questionnaire that had statements to hospital staffs and also interview questions to senior hospital management. In the questionnaires, the respondents were either supposed to 1-Strongly disagree, 2-disagree, 3- Neither agree nor disagree, 4-Agree and 5- Strongly agree. The results are represented in Table 4.9.

Table 4.9

Descriptive Statistics on Strategic Information Technology Adoption

Statements N=64	**1**	**2**	**3**	**4**	**5**	**Mean**	**Std Dev**
Customers take little time to be served	2(3%)	8(13%)	0(0%)	14(22%)	40(62%)	**4.25**	**.19**
There increased uptake of ICT innovations	0(0%)	4(6%)	1(1%)	8(12%)	51(81%)	**4.68**	**.78**
The facility implements latest electronic medical records	1(1%)	7(11%)	0(0%)	11(18%)	45(70%)	**4.45**	**.02**
The facility has sets up intranets for sharing information	0(0%)	11(18%)	0(0%)	33(51%)	20(31%)	**3.95**	**.02**
There is use of public networks	0(0%)	4(6.0%)	0(0%)	33(51%)	27(43%)	**4.31**	**.76**
The facility uses modern technology for providing remote diagnostics.	4(6%)	17(27%)	1(2%)	33(51%)	9(14%)	**3.42**	**.19**
Average Mean						**4.18**	**0.99**

According to the Table 4.9, strategic information technology adoption had an average mean of 4.18 and standard deviation of 0.99. This particular variable had various statements in which respondents agreed and disagreed. For example, with a mean of 4.68 and standard deviation of .779, respondents agreed that there was an increased uptake of ICT innovations in the hospitals' operations. Nevertheless, there was a low mean of 3.42 and standard deviation of 1.194 disagreement that the hospitals used modern technologies for providing remote diagnostics. In conclusion, in as much as hospitals had adopted ICT innovations, there was still under utilization of ICT innovation to aid medical personnel in making medical decisions. That meant ICT in hospitals was being used for other purposes. In agreement Kimanzi (2014) seemed to find the same results in Mwingi Sub-County Hospital, Kitui County where one hinderance of health care reaching its maximum potential was stated to be lack of skills to incorporate it into medical field.

The results showed that hospitals were struggling towards changing from traditional methods towards modernization. This is because it was first very expensive to purchase new and modernized machines that would make life easier. Secondly, it was evident that hospital staff were so rigid to change from what they knew. This is because, they felt that their positions would be taken-up by other qualified professional who had mastered the use of these modern machinery. So as a result, they would completely reject use of these modernized hospital machines. On the part of the hospital management, there were no scheduled trainings offered to staff on shifting from old methods to modernized methods.

4.10 Service Delivery in Level 3 and 4 Public Health Facilities in Laikipia County

The study also assessed service delivery by Laikipia County Government in level 3 and 4 public health facilities. Service delivery had indicators such as quality healthcare service and affordable healthcare service. The researcher developed a questionnaire that had statements to hospital staffs and also interview questions to senior hospital management. In the questionnaires, the respondents were either supposed to indicated whether service delivery was 1-very poor, 2-poor, 3- fair, 4- good or 5- very good. The results are represented in Table 4.10.

Table 4.10

Descriptive Statistics on Service Delivery

Statements N=64	**1**	**2**	**3**	**4**	**5**	**Mean**	**Std Dev**
Quality of service rendered	1(1.2%)	1(1.2%)	0(0%)	6(9.5%)	56(88.1%)	**4.84**	**0.60**
Timeliness in service delivery	0(0%)	8(11.9%)	0(0%)	19(31.0%)	37(57.1%)	**4.33**	**0.97**
Supplies / Reagents/ Drug availability	5(7.1%)	19(29.8%)	0(0%)	23(35.7%)	17(27.4%)	**3.46**	**0.36**
Equipment availability	2(2.4%)	8(13.1%)	16(25.0%)	6(9.5%)	32(50.0%)	**3.92**	**0.22**
Caseload per health provider	5(7.1%)	27(42.9%)	0(0%)	32(50.0%)	0(0%)	**2.93**	**0.11**
Diagnostic accuracy	2(2.4%)	7(11.9%)	2(2.4%)	19(29.8%)	34(53.6%)	**4.20**	**0.11**
Adherence to set operational guidelines	5(8.3%)	16(25.0%)	1(1.2%)	24(38.1%)	18(27.4%)	**3.51**	**0.35**
Average Mean						**3.88**	**0.10**

Statistics from Table 4.10 showed that service delivery in Level 3 and 4 public health facilities had an average mean of 3.88 and a standard deviation of 1.10. It was true that

the quality of service rendered significantly very good on a mean of 4.84 and a standard deviation of 0.604. Despite the quality improving it was noticed that caseload per health provider had a low mean of 2.93 and standard deviation of 1.106. This meant that there was overworking aspect in Level 3 and 4 public hospitals in Laikipia county. A report by ministry of health (2017) hinted on reducing work load per medical staff in Kenya as a strategy of transforming health to achieve universal health coverage.

From the findings, it was no secret that medical practitioners were being overworked in delivery of their roles. They were forced to work on double shifts with delayed payments, work during odd hours, and during weekends. This was greatly affecting their input towards being energized and creative in providing solutions that were life-saving. It was established that hospital staff such as nurses had a tendency of having frequent burn-outs which causes increase of stress. It was true that indeed they were no longer happy with their respective roles and were in constant look-out for new jobs. This led to late delivery of assigned tasks, lateness to work and frequent absence from work. The study interestingly also discovered that some of the hospital staff had gone to an extent of paying their colleagues money to work on behalf of their shifts due to fatigue. The end-term results included a lot of errors and mistakes in their work which was highly discouraged in that they were dealing with people's lives.

4.11 Linear regression of variables

Linear regression was performed in the study to assess the level of contribution of each strategic healthcare services adopted on service delivery. This was achieved by

considering the model summary of each strategy and collectively all strategies and their coefficients.

4.11.1 Strategic Resource Allocation Model Summary

Strategic resource allocation model explained what proportion of this variable caused change on service delivery. It had an R value of .851 and an R square value of .723. Explained further it indicated that strategic resource allocation model forecasted 72.3% change on service delivery. The results are represented in Table 4.11.

Table 4.11

Strategic Resource Allocation Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
	.851[a]	.723	.711	3.515

a. Predictors: (Constant), Strategic resource allocation

4.11.2 Strategic Resource Allocation Hypothesis Testing

Establishing the influence of strategic resource allocation by Laikipia County Government on service delivery in level 3 and 4 public health facilities, involved testing a hypothesis. The first hypothesis stated that strategic resource allocation by Laikipia County did not have a statistically significant influence on service delivery in level 3 and 4 public health facilities. The results are represented in Table 4.12.

Table 4.12

ANOVA for Linear Relationship Between Strategic Resource Allocation and Service Delivery

Model		Sum of Squares	Df	Mean Square	F	Sig.
	Regression	851.474	1	851.474	1.900	.002[b]
	Residual	1012.847	82	12.352		
	Total	1036.321	83			

a. Dependent Variable: Service delivery

b. Predictors: (Constant), Strategic resource allocation

Results on Table 4.12 indicated that the significance p-value of the relationship was 0.02 which was less than 0.05. Therefore, the researcher rejected the null hypothesis that strategic resource allocation by Laikipia County did not have a statistically significant influence on service delivery in level 3 and 4 public health facilities.

4.11.3 Strategic Human Resource Development Model Summary

Strategic human resource development model explained what proportion of this variable caused change on service delivery. It had an R value of .618 and an R square value of .514. Explained further it indicated that strategic human resource development model forecasted 51.4% change on service delivery. The results are represented in Table 4.13.

Table 4.13

Strategic Human Resource Development Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.618[a]	.514	.5122	3.530

a. Predictors: (Constant), Strategic human resource development

4.11.4 Strategic Human Resource Development Hypothesis Testing

Assessing the influence of strategic human resource development by Laikipia County Government on service delivery in level 3 and 4 public health facilities, involved testing a hypothesis. The second hypothesis stated that strategic human resource development by Laikipia County did not have a statistically significant influence on service delivery in level 3 and 4 public health facilities. The results are represented in Table 4.14.

Table 4.14

ANOVA for Strategic Human Resource Development and Service Delivery

Model		Sum of Squares	Df	Mean Square	F	Sig.
	Regression	618.484	1	618.484	1.162	.004[b]
	Residual	1021.838	82	12.461		
	Total	1036.321	83			

a. Dependent Variable: Service delivery

b. Predictors: (Constant), Strategic human resource development

Table 4.14 indicated that the significance p-values of the relationship was 0.04 which was less than 0.05. Therefore, the researcher rejected the null hypothesis that strategic human

resource development by Laikipia County did not have a statistically significant influence on service delivery in level 3 and 4 public health facilities

4.11.5 Strategic Procurement Process or Procedures Model Summary

Strategic procurement process or procedures model explained what proportion of this variable caused change on service delivery. It had an R value of .441 and an R square value of .320. Explained further it indicated that strategic human resource development model forecasted 32% change on service delivery. The results are represented in Table 4.15.

Table 4.15

Strategic Procurement Process or Procedures Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.441[a]	.320	.312	3.519

a. Predictors: (Constant), Strategic procurement process or procedures

4.11.6 Strategic Procurement Process or Procedures Hypothesis Testing

Examining the influence of strategic procurement process or procedures by Laikipia County Government on service delivery in level 3 and 4 public health facilities, involved testing a hypothesis. The third hypothesis stated that strategic procurement process or procedures by Laikipia County do not have a statistically significant influence on service delivery in level 3 and 4 public health facilities. The results are represented in Table 4.16.

Table 4.16

ANOVA for Strategic Procurement Process and Service Delivery

Model		Sum of Squares	Df	Mean Square	F	Sig.
	Regression	441.724	1	441.724	1.673	.00b
	Residual	1015.598	82	12.385		
	Total	1036.321	83			

a. Dependent Variable: Service delivery

b. Predictors: (Constant), Strategic Procurement Process or Procedures

Table 4.16 indicated that the significance p-values of the relationship was 0.00 which was less than 0.05. Therefore, the researcher rejected the null hypothesis that strategic procurement process or procedures by Laikipia County did not have a statistically significant influence on service delivery in level 3 and 4 public health facilities.

4.11.7 Strategic Information Technology Adoption Model Summary

Strategic information technology adoption model explained what proportion of this variable caused change on service delivery. It had an R value of .907 and an R square value of .877. Explained further it indicated that strategic human resource development model forecasted 87.7% change on service delivery. The results are represented in Table 4.17.

Table 4.17

Strategic Information Technology Adoption Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.907[a]	.877	.865	3.416

a. Predictors: (Constant), Strategic information technology adoption

4.11.8 Strategic Information Technology Adoption Hypothesis Testing

Scrutinizing the influence of strategic information technology adoption by Laikipia County Government on service delivery in level 3 and 4 public health facilities, involved testing a hypothesis. The fourth hypothesis stated that Strategic information technology adoption by Laikipia County does not have a statistically significant influence on service delivery in level 3 and 4 public health facilities. Table 4.18 shows the analysis of variance on strategic information technology adoption and service delivery.

Table 4.18

ANOVA for Strategic Information Technology Adoption and Service Delivery

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	907.400	1	907.400	6.804	.001[b]
	Residual	956.921	82	11.670		
	Total	1036.321	83			

a. Dependent Variable: Service delivery

b. Predictors: (Constant), Strategic information technology adoption

Table 4.18 indicated that the significance p-values of the relationship was 0.01 which was less than 0.05. Therefore, the researcher rejected the null hypothesis that strategic

information technology adoption by Laikipia County did not have a statistically significant influence on service delivery in level 3 and 4 public health facilities.

4.11.9 Strategic Healthcare Services Model Summary

When all the variables of the study were combined to explain what proportion caused change on service delivery, the R value was .817 and an R square value of .721. That meant that strategic health services combined forecasted 72.1% change on service delivery. The results are represented in Table 4.19.

Table 4.19

Strategic Healthcare Services Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.817[a]	.721	. 655	3.436

a. Predictors: (Constant), Strategic information technology adoption, Strategic procurement process or procedures, Strategic human resource development, Strategic resource allocation

4.11.10 ANOVA for linear relationship between strategic healthcare services and service delivery

The output on Table 4.20 indicates that the *p*-value was 0.006 which was less than 0.05 at 0.05 significance level. This implied that the entire model on the connection between the strategic healthcare services and service delivery was statistically significant and the model could be used to predict the results of level 3 and 4 public health facilities in Laikipia county.

Table 4.20

ANOVA for strategic healthcare services and service delivery

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	817.882	4	817.970	2.200	.006[b]
Residual	932.440	79	11.803		
Total	1036.321	83			

a. Dependent Variable: Service delivery

b. Predictors: (Constant), Strategic information technology adoption, Strategic procurement process or procedures, Strategic human resource development, Strategic resource allocation

4.12 Multiple Linear regression

In determining the coefficients of the variables, the study analyzed the multiple linear regression of the variables. The results as indicated in Table 4.21 shows that the strategic resource allocation had a β=.324, P=449; strategic human resource development had a β=.009, P=972; strategic procurement process or procedures had a β=.108, P=.287; while strategic information technology adoption had a β=.545, P=121. These results shows that when strategic resource allocation, strategic human resource development, strategic procurement process or procedures and strategic information technology adoption were separate, they were significant. However, when they were combined on strategic information technology adoption was significant.

Table 4.21

Regression Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	19.580	4.821		4.061	.620
Strategic resource allocation	.324	.425	.169	.761	.449
Strategic human resource development	.009	.241	.006	.035	.972
Strategic procurement process or procedures	.108	.101	.116	1.071	.287
Strategic information technology adoption	.545	.232	.398	2.351	.121

a. Dependent Variable: Service delivery

The general model of the study was SDPH = K + β_1 SRA + β_2 SHRD + β_3 SPPP + β_4 SITA + Ɛ. Where: SDPH was service delivery in public hospitals; SRA was strategic resource allocation; SHRD was strategic human resource development; SPPP was strategic procurement process or procedures; and SITA was strategic information technology adoption. When the coefficients were put into the model as from Table 4.22, the model was: Service delivery =19.580K+0.324SRA+0.009SHRD+0.108SPPP+545SITA. That was to say by adding a unit of SRA, SHRD, SPPP or SITA, service delivery increased or decreased by 19.580+0.324+0.009+0.108+545.

These results indicated that the hospitals had made strides towards advancing and adopting technology. There was a good sign that county government was working well to ensure that Laikipia hospitals were still within the radar of growth technologically. However, when it came to issues surrounding staffing within the hospitals, little had been achieved. It was gathered that the hospital's medical practitioners were working under stressful environment especially in the current covid-19 pandemic which was not compensated well. The various health professionals also complained a lot to frequent burn-outs due to lack of enough staff. They suffered a lot to a point of some of them compelled to working double shifts by their supervisors. This has greatly deteriorated service delivery in the level 3 and 4 hospitals in Laikipia county.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter gave the synopsis of the whole study including the outcome gotten from the variables. The chapter was organized in such a way where a summary of the outcomes was first given, trailed by the conclusion derived from strategic resource allocation, strategic human resource development, strategic procurement process or procedures and strategic information technology adoption. Later on, the recommendation was given on each variable. The future research guideline was lastly given.

5.2 Summary of the Findings

The study had a mandate to investigate four objectives as indicated in chapter one of this document. Data was collected on the variables and the results analyzed to derive an exhaustive outcome. This section gave summary outcome of strategic resource allocation, strategic human resource development, strategic procurement process or procedures and strategic information technology adoption.

5.2.1 Strategic Resource Allocation

The first objective of the study was to establish influence of strategic resource allocation by Laikipia County Government on service delivery in level 3 and 4 public health facilities. This first objective had indicators such as allocation by type of resource and allocation by functional areas. The results indicated that strategic resource allocation had an average mean of 4.69 and a standard deviation of 0.64. It was discovered that though

there were resources enough to obtain various medical supplies, there was a gap in ensuring that departments got all the requirements they were in need of. The researcher discovered that mis-balance between departments getting required resources in which they are dispensed to. Strategic resource allocation model explained what proportion of this variable caused change on service delivery. It had an R value of .851 and an R square value of .723. Explained further it indicated that strategic resource allocation model forecasted 72.3% change on service delivery. Strategic resource allocation had a β=.324, P=449.

5.2.2 Strategic Human Resource Development

The second objective of the study was to evaluate influence of strategic human resource development by Laikipia County Government on service delivery in level 3 and 4 public health facilities. This second objective had indicators such as strategic training programs and staff motivation. Strategic human resource development had an average of 4.35 and a standard deviation of 0.75. Strategic human resource development model explained what proportion of this variable caused change on service delivery. It had an R value of .618 and an R square value of .514. Explained further it indicated that strategic human resource development model forecasted 51.4% change on service delivery. Strategic human resource development had a β=.009, P=972.

5.2.3 Strategic Procurement Process or Procedures

The third objective of the study was to measure the influence of strategic procurement process or procedures used by Laikipia County Government on service delivery in level 3 and 4 public health facilities. This third objective had indicators such as control of

operational capability factors and supplier management practices. Strategic procurement process or procedures had the lowest mean of 2.69 and standard deviation of 0.75 as compared to other variables of the study. The results implied that in as much as departments needs were being met, it was still not adequate to cater for all the demands in a significant way. Strategic procurement process or procedures model explained what proportion of this variable caused change on service delivery. It had an R value of .441 and an R square value of .320. Explained further it indicated that strategic human resource development model forecasted 32% change on service delivery. Strategic procurement process or procedures had a β=.108, P=.287.

5.2.4 Strategic Information Technology Adoption

The fourth objective of the study was to find out the influence of strategic information technology adoption by Laikipia County Government on service delivery in level 3 and 4 public health facilities. This objective had indicators such as quality of information systems and uptake of latest technologies. Strategic information technology adoption had an average mean of 4.18 and standard deviation of 0.99. In as much as hospitals had adopted ICT innovations, there was still under utilization of ICT innovation to aid medical personnel in making medical decisions. Strategic information technology adoption model explained what proportion of this variable caused change on service delivery. It had an R value of .907 and an R square value of .877. Explained further it indicated that strategic human resource development model forecasted 87.7% change on service delivery. Strategic information technology adoption had a β=.545, P=121.

5.3 Conclusions of the Study

The study established that the connection between the strategic healthcare services and service delivery was statistically significant and the model can be used to predict the results of level 3 and 4 public health facilities in Laikipia county. On the first hypothesis the researcher rejected the null hypothesis that strategic resource allocation by Laikipia County did not have a statistically significant influence on service delivery in level 3 and 4 public health facilities. This was because significance p-value of the relationship was 0.02 which was less than 0.05. Therefore, the researcher concluded that there was a strong positive statistical significance influence between strategic resource allocation and service delivery.

On the second hypothesis, the researcher rejected the null hypothesis that strategic human resource development by Laikipia County did not have a statistically significant influence on service delivery in level 3 and 4 public health facilities. This was because the significance p-value of the relationship was 0.04 which was less than 0.05. Therefore, the researcher concluded that though the relationship between strategic human resource development and service delivery was positive and statistically significant, it was weak as compared to other variables of the study.

On the third hypothesis, the researcher rejected the null hypothesis that strategic procurement process or procedures by Laikipia County did not have a statistically significant influence on service delivery in level 3 and 4 public health facilities. This was because the significance p-value of the relationship was 0.00 which was less than 0.05.

Therefore, the researcher concluded that there was an average positive statistical significance influence between strategic human resource development and service delivery.

On the fourth hypothesis, the researcher rejected the null hypothesis that strategic information technology adoption by Laikipia County did not have a statistically significant influence on service delivery in level 3 and 4 public health facilities. This because the significance p-value of the relationship was 0.01 which was less than 0.05. Therefore, the researcher concluded that there was a very strong positive statistical significance influence between information technology and service delivery.

5.4 Recommendations of the Study

Based on the findings of the study, the study recommended various measures to be improved in strategic resource allocation, strategic human resource development, strategic procurement process or procedures and strategic information technology adoption.

On strategic resource allocation, the study recommended that there should be clear resource tracking within the departments. There should be easy and less bureaucratic replenishing of the resources since these departments have generated them. There should be policies put into place to factor in quick, reliable and quality replenishing within various departments of hospitals.

On strategic human resource development, the study recommended that there should hospitals should value human resources very well since they are vital medium through which the hospital's vision and mission is accomplished. There should be a review of

remuneration once a year to boost the morale of staff. There should also be frequent promotion based on merits that are reviewed once in two years. That is to say, staff should be encouraged to improve their necessary skills so as offer better services in the hospital arena.

On strategic procurement process or procedures, the study recommended that there should be a system of identifying departmental needs and being able to meet up with the needs. Policies should be developed by hospital management on the turn-around time required to respond to a departmental demand. There should also be co-ordination between departments whereby even if there was delayed feedback on demand communicated, departments would be able to share available resources adequately as they wait their demands to be met.

On strategic information technology adoption, the study recommended there should be training on how various medical staff can utilize ICT to make their works even easier. Consultations should be improved to the IT department on various customization of ICT features whereby they could be incorporated into the system to help for example doctors in identifying an ailment very fast and at very early stages in a patient. There should also be frequent inter-department meetings whereby hospital staffs would exchange ideas on how they think certain ICT developments would be incorporated in other departments as well.

5.5 Suggestion of Future Research

The researcher concentrated in Level 3 and 4 public hospitals in Laikipia County only. Therefore, future studies may look into other counties in the remaining 46 counties in

Kenya and see whether their results would be similar as the ones derived in this study. The study also concentrated on public institutions; future studies may consider venturing into private institutions to assess whether service delivery is affected by the variables similar to this study.

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APPENDICES

Appendix I: Introduction letter

Dear Participant,

I am a student currently enrolled in the Masters of Business Administration (MBA) specializing in strategic management at Kenya Methodist University (KeMU). I am in the process of writing my thesis. I invite you to participate in a research study entitled as the 'strategic healthcare services adopted by county governments in service delivery in level 3 and 4 public health facilities in Laikipia county'.

Your responses will remain confidential and anonymous. In addition, data from this study will be kept under secure systems and reported as a collective effort. If you agree to participate in this study, please answer the questions on the questionnaire as best you can. However, your participation in this study is completely voluntary.

Your faithfully

Evaline Nasieku Lesiyampe

BUS-3-9027-2/2018

Appendix II: Research Questionnaire

1. Gender (Sex)

   Male [ ] Female [ ]

2. Age

   18 to 27 years [ ] 38 to 47 years [ ]

   28 to 37 years [ ] 48 and above years [ ]

3. Job Designation …… (Indicate whether Nurse, Doctor etc….)

4. How long have you worked in your current work station in this facility?

   0 to 3 years [ ]

   4 to 6 years [ ]

   7 to 9 years [ ]

   10 years or above [ ]

5. How would you describe the rate of service delivery by your department along the following aspects?

Aspect of Service Delivery	**Very Poor**	**Poor**	**Fair**	**Good**	**Very Good**
Quality of service rendered					
Timeliness in service delivery					
Supplies / Reagents/ Drug availability					
Equipment availability					
Caseload per health provider					
Diagnostic accuracy					
Adherence to set operational guidelines					

Section B: Strategic Resource Allocation

6. The following statements explain the resource allocation practice in your department. Please indicate whether or not you agree or not using the scale provided below.

   Strongly Disagree [1] Agree [4]

   Disagree [2] Strongly Agree [5]

   Neutral [3]

Statement	**1**	**2**	**3**	**4**	**5**
Our facility has adequate resources for research and development					
There are adequate finances for departmental operations at the facility					
Our department has enough resources to obtain requisite medical supplies					
Our department has all requisite operational equipment.					
Our department has adequate manpower for it to function well					

Section C: Strategic Human Resource Development

7. The following statements explain the resource allocation practice in your department. Please indicate whether or not you agree or not using the scale provided below.

   Strongly Disagree [1] Agree [4]

   Disagree [2] Strongly Agree [5]

   Neutral [3]

Statement	**1**	**2**	**3**	**4**	**5**
There is a properly coordinated communication system between the health workers and patients					

Workers at the facility are properly remunerated and this motivates them.					
There is a good policy of staff incentive and rewards in place					
Employees at the facility are usually prepared for increased responsibilities through training.					
There is careful and selective recruiting and retention of doctors and nurses					

Section D: Strategic Procurement Process or Procedures

8. The following statements explain the resource allocation practice in you department. Please indicate whether or not you agree or not using the scale provided below.

Strongly Disagree [1] Agree [4]

Disagree [2] Strongly Agree [5]

Neutral [3]

Statement	**1**	**2**	**3**	**4**	**5**
There is total adherence to the recommended tendering procedures					
All the departmental requests (equipment or supplies) are replenished as per specifications					
Supplies to the departments are adequate to meet demand					
Supplier monitoring ensures that only supplies of good quality are procured					
The procurement department ensures timeliness in delivery of supplies to departments					

Section E: Strategic Information Technology Adoption

9. The following statements explain the resource allocation practice in your department. Please indicate whether or not you agree or not using the scale provided below.

   Strongly Disagree [1]

   Disagree [2]

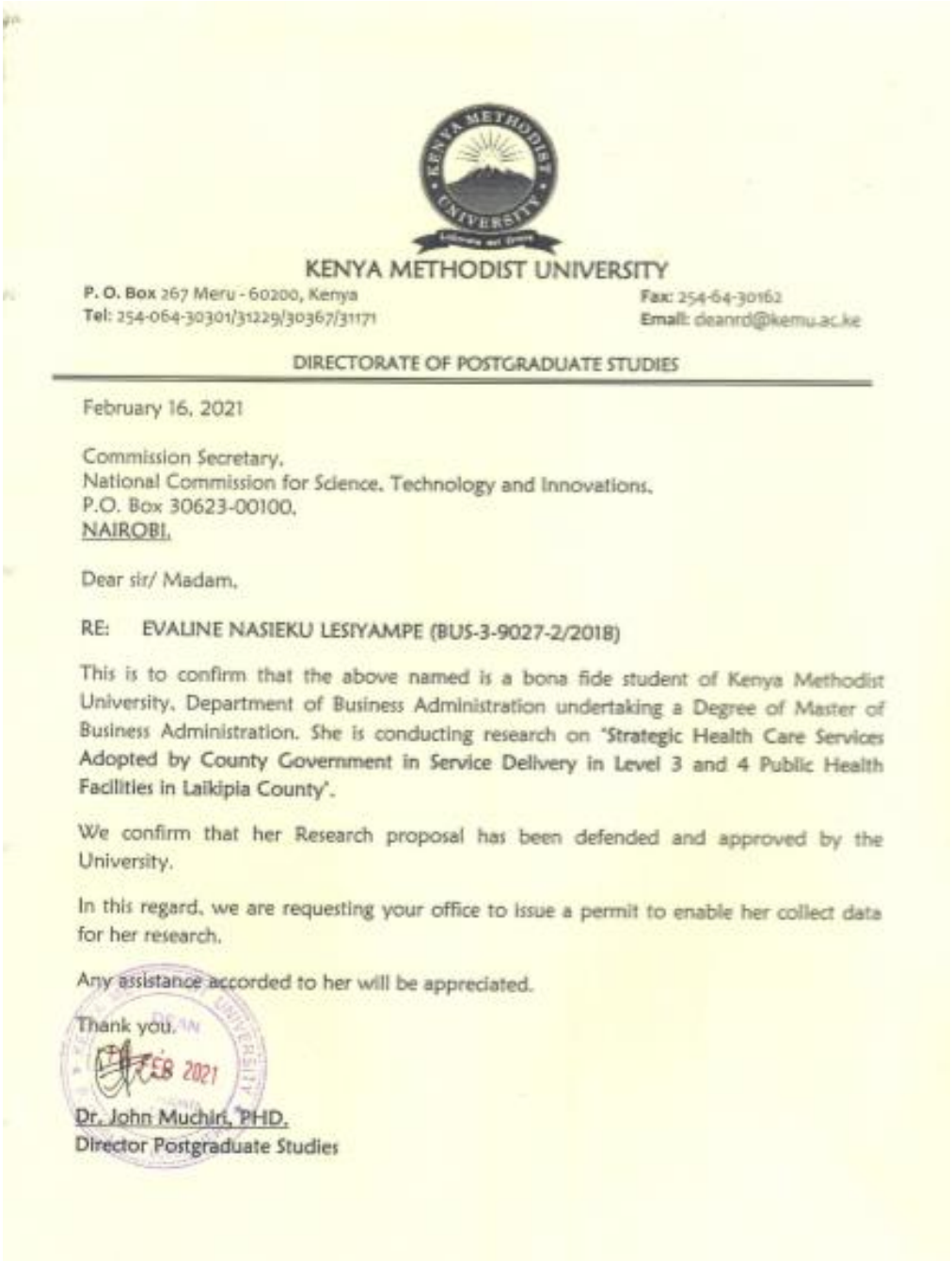
   Neutral [3]

   Agree [4]

   Strongly Agree [5]

Statement	**1**	**2**	**3**	**4**	**5**
Customers take little time to be served as a result of good information systems.					
There increased uptake of ICT innovations in the hospitals' operations					
The facility implements latest electronic medical records					
The facility has sets up intranets for sharing information among key stakeholders					
The uses public networks, such as the Internet, for distributing health-related information					
The facility uses modern technologies for providing remote diagnostics.					

Appendix III: Introduction letter (KeMU)



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DIRECTORATE OF POSTGRADUATE STUDIES

February 16, 2021

Commission Secretary,
National Commission for Science, Technology and Innovations,
P.O. Box 30623-00100,
NAIROBI.

Dear sir/ Madam,

RE: EVALINE NASIEKU LESIYAMPE (BUS-3-9027-2/2018)

This is to confirm that the above named is a bona fide student of Kenya Methodist University, Department of Business Administration undertaking a Degree of Master of Business Administration. She is conducting research on 'Strategic Health Care Services Adopted by County Government in Service Delivery in Level 3 and 4 Public Health Facilities in Laikipia County'.

We confirm that her Research proposal has been defended and approved by the University.

In this regard, we are requesting your office to issue a permit to enable her collect data for her research.

Any assistance accorded to her will be appreciated.

Thank you.

FEB 2021

Dr. John Muchiri, PHD.
Director Postgraduate Studies

Appendix IV: Nacosti research permit

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: **235420**

Date of Issue: **17/March/2021**

RESEARCH LICENSE

This is to Certify that Miss.. EVALINE LESIYAMPE NASIEKU of Kenya Methodist University, has been licensed to conduct research in Laikipia on the topic: STRATEGIC HEALTHCARE SERVICES ADOPTED BY COUNTY GOVERNMENTS IN SERVICE DELIVERY IN LEVEL 3 AND 4 PUBLIC HEALTH FACILITIES IN LAIKIPIA COUNTY for the period ending : 17/March/2022.

License No: **NACOSTI/P/21/9597**

235420

Applicant Identification Number

Director General
NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Verification QR Code

NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.

Appendix V: Publication

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Influence of Strategic Resource Allocation by Laikipia County Government on Service Delivery in Level 3 and 4 Public Health Facilities

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ABSTRACT

Purpose: The purpose of the study was to examine the influence strategic resource allocation by Laikipia county government on service delivery in level 3 and 4 public health facilities.

Methodology: The target population comprised of a sample of 74 medical practitioners. The respondents were doctors, nurses, pharmacists, lab technicians, radiologists, teaching staff and administration staff. Descriptive survey design was adopted for the study. Primary data was collected through questionnaires. Simple random sampling technique was used in guiding the selection of the study sample. A pilot study was conducted in 10 percent of the study sample from Naivasha County. Before administering the instruments, they were subjected to validity checks and reliability tests. Data analysis was done using tools in the SPSS version 25. Analysis involved computation of descriptive statistics such as frequencies, percentages, means and inferential statistics such as Pearson Correlation and regression analysis. The data was then presented in tables and narrations.

Results: The study established that the connection between the strategic resource allocation services and service delivery was statistically positive and significant hence the model can be used to predict the results of level 3 and 4 public health facilities in Laikipia county. It had an R value of .851 and an R square value of .723. Explained further it indicated that strategic resource allocation model forecasted 72.3% change on service delivery. Strategic resource allocation had a β=.324, P=449.

Unique contribution to theory, policy and practice: Though there were resources enough to obtain various medical supplies, there was a gap in ensuring that departments got all the requirements they were in need of. The study discovered that mis-balance between departments getting required resources in which they are dispensed to. The study recommended that there should be clear resource tracking within the departments. There should be easy and less bureaucratic replenishing of the resources since these departments have generated them. There should be policies put into place to factor in quick, reliable and quality replenishing within various departments of hospitals.

Keywords: *Strategic resource allocation, service delivery, Laikipia County, public health facilities*