AN EVALUATION OF THE EFFECTS OF DEVOLUTION ON HEALTHCARE DELIVERY IN NAKURU COUNTY

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DECLARATION AND APPROVAL

DECLARATION

I hereby declare that this research project is my original work and that it has not been presented in any other learning institution for academic purposes or any other reason.

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APPROVAL

This research project has been presented with our approval as university supervisors

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DEDICATION

This work is dedicated to my husband Jamlick Mutugi Muriithi, who urged me to pursue my master's degree and has always been there to give me support. I also dedicate it to my two beautiful daughters Sayianet Nkirote and Semerian Nkatha, whom I raised at a tender age as I pursued the studies. Finally yet importantly, special dedication goes to my mother Agnes Naisiae and my Finnish parents Mr and Mrs Matti Hukka for their prayers, affection and support throughout the study period.

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I take responsibility for all errors and omissions.

ABSTRACT

The promulgation of a new constitution of Kenyan on 31st August 2010 effectively created two levels of government; the national and county governments. Provision of health services is one of the functions that were devolved to the county government amid resistance from the health care workers' unions. Devolution of health functions was aimed at improving access to more equitable and high quality health services to the Kenyan citizens. The health sector, therefore, embarked on review of the existing policies, legal and strategic framework for health, to conform with and facilitate implementation of the new constitution. This study sought to analyze the effects of devolution on healthcare delivery in Nakuru County. The study employed a quasi-experimental research design to explore the rating of performance of the health care system before and after devolution. Four key domains in the health systems were explored namely, health service delivery, leadership and governance in health, management of human resources for health and health care financing. The target population was the healthcare workers with management portfolios and the sample population was arrived at using stratified sampling method. A questionnaire was used to collect primary data after it was pilot-tested in Subukia sub-county and edited to improve clarity and validity. Descriptive proportions of the respondents and their cadres were derived. Qualitative data was analysed thematically, while quantitative data analysis utilized chi-square tests or Fisher's exact test, where applicable, as well as factor analysis. The findings of this study show a statistically significant deterioration of various elements of quality health services after devolution. Similarly, there was significantly poorer rating of the leadership and governance system, the management of human resources for health as well as worsening of the health-financing domain under the devolved structure. Therefore, the aspirations of devolution of health can be achieved if the county governments were to adopt a systems-approach to improve the health functions. Staff demotivation was one of the key recurring themes throughout the study and needs urgent redress. The county leadership should embrace a consultative approach that inspires confidence in the health workforce and ensure health resources are equitably used. Finally, success of devolution of health hinges on application of multiple and varied mechanisms all of which should increase the financial resources and human capital for delivery of quality health care.

Key Words: *Devolution, Healthcare Delivery, Healthcare Financing, Health Workforce.*

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ACRONYMS

AIDS	Acquired Immunodeficiency Syndrome
CEC	County Executive Committee
CGA	County Government Act
CHSIP	County Health Strategic and Investment Team
CHMT	County Health Management Team
COK	Constitution Of Kenya
CUS	Community Units
CRA	Commission on Revenue Allocation
CSOs	Community Service Organizations
DHMT	District Health Management Team
FBOs	Faith Based Organization
GDP	Gross Domestic Product
HCWs	Health Care Workers
HIV	Human Immunodeficiency Virus
HMT	Hospital Management Team
HR	Human Resource
LAO	Local Administrative Organization
MOH	Ministry Of Health
NGOs	Non-Governmental Organization
PHMT	Provincial Health Management
SAGAs	Semi-Autonomous Government Agency
SCHMT	Sub County Health Management Team
WHO	World Health Organization

CHAPTER ONE

INTRODUCTION

1.1. Background of the Study

The constitution of Kenya (2010) defines devolution as the transfer of powers, responsibilities, functions and services (governance structures) from the national government to the county governments that elect their own governors and other leaders, raise their own revenues, and have independent authority to make investment decisions. In a devolved system local governments have clear and legally recognized geographical boundaries over which they exercise authority and within which they perform public functions.

Devolution in Kenya is based on the supremacy[1] of the Constitution, sovereignty[2] of the people and the principle of public participation. It is one of the concepts in the Constitution that has brought about a complete overhaul in Kenya's system of governance and this can be said to be because it is a new aspect in the Kenyan governance system. According to the Kenyan Section of the International Commission of Jurists, (2013) the need for devolution has been seen in many countries and it is informed by the need to have power sharing, checks and balances in governance and the decentralization of resources.

Under the devolved system of governance, counties provide the bigger share of delivery of health services. This implies that every County bears overall responsibility of planning for its resources, financing, coordinating activities and monitoring of health services toward the fulfilment of the highest attainable standard of health contained in the bill of rights.

According to Omolo, Kantai, and Wachira (2010) devolution allows county governments the freedom to come up with innovative forms of service delivery that suits their unique health needs, an ample capacity to determine their health system priorities, and the power to make independent

[1] Supremacy of the Constitution means that the Constitution is the supreme law of the Republic (The Kenyan Section of the International Commission of Jurists, 2013). Therefore, devolution being an aspect of the Constitution binds all persons and all State organs at both levels of government.

[2] The sovereign power of the people means that the power to rule and make laws in Kenya lies with the people of Kenya and can be exercised only in accordance with the Constitution at the national and county level either directly or indirectly, through their democratically elected representatives(The Kenyan Section of the International Commission of Jurists, 2013).

decisions on subsector resource allocation and expenditure. On the other hand, devolving the health systems comes with other challenges like equity issues, institutional and resource that must be considered to ensure a successful and sustainable health system.

Despite the positivism of devolution, the perpetual shortcomings of the centralized system in the last 50 years, including uneven levels of development. Also unequal distribution of resources for health especially the distribution of health facilities, human resources, and poorly developed communication infrastructure remain unaddressed even as Kenya transitioned to the devolved system (Office of the Deputy Prime Minister and Ministry of Local Government, 2012). For successful devolution to be achieved it requires first synchronization in planning, budgeting, monitoring and evaluation of health systems at national and local level and strategic approach to management through shared accountability vertically (between national and local governments) and horizontally (between county administrations).

In Kenya, devolution is viewed as the answer to the persistent regional disparities in the allotment of health services and inequities in resource allocations (Health Sector Report, 2012). Nonetheless, much as this could be the ideal, its realization may not be instant, especially because of the current speckled levels of preparedness within the counties. According to World Bank (2012), a number of counties were to start at a comparative disadvantage and it would take time to build up their aptitude and capability to use devolved resources well, which may lead to even wider disparities. Such counties would require particular assistance to pull alongside with others. It further adds that achievement of devolution depends on accessibility of resources for counties to carry out their assigned functions, and empowerment to use resources efficiently.

In 1991 the Philippines Government introduced a major devolution of national government services including health services. The aim was to improve management of services and make them more available to the people. What followed however was that this led to falling quality and coverage of health services in rural and remote areas, the opposite of what devolution was meant to achieve (Bossert & Beauvais, 2002). They further state that five years after devolution, there was a breakdown in management systems between national and local levels of government, poor staff morale, a decline in maintenance of infrastructure and under financing of operational costs of services. The government of Philippines was forced to review the policy.

The Philippines history could repeat itself in Kenya. The frequent health workers strikes (see Appendix 4) are a signal that all is not well. Although resignations of health workers has been dismissed as insignificant with county governments threatening to hire replacements for the striking staff, this has been done without a thorough review of the sector, signalling the possibility that management at both national and county levels could be out of touch with emerging realities. In one incident, in a county in Western Kenya, a surgeon disagreed with the county on how services should be managed. The county rejected him and later the government then transferred him to a neighbouring county that also rejected him (Osur, 2013). It was a situation where the county governments want to take their constitutional role of running health services yet they are not working in harmony with professionals who still feel they are not part of the county system.

The ministry of health through the various health sector strategic plans expressed commitment to devolution intended to provide increased authority for decision making, resource allocation, and management of health care to the district and facility levels. According to Wamai, (2013) in 1992 the MOH established the District Health Management Teams (DHMTs) and the District Health Management Boards (DHMBs) with the intension of bringing services close to the people and enhancing equitable distribution of resource. These teams were charged with managing public health services at the district level. Together, the DHMT and DHMB were supposed to provide management and supervisory support to lower level health facilities such as sub district hospitals, health centers, and dispensaries.

With the implementation of the new Kenyan constitution 2010, the above arrangement of the ministry of health changed. The fourth schedule of the constitution establishes the distribution of functions between the national government and the county governments. The central government handles national referral health facilities and Health policy development, while county government handles county health services and facilities[3]. The County health services include county health facilities and pharmacies, ambulance services, promotion of primary health care, licensing and control of undertakings that sell food to the public.

[3] County health facilities and services include: County referral hospitals, sub county hospitals, rural health centers, dispensaries, rural health training and demonstration Centre's. Other services include: rehabilitation and maintenance of county health facilities, medical equipment and machinery

According to Sandiford, (1999) evaluation of performance of the health systems in Latin America shows that devolution does not necessarily lead to more locally appropriate health services, innovation, greater accountability, community participation and ownership of services, or better management. He adds that although governments in Bolivia, Mexico, and Brazil allocated funds for the health sector to the devolved units based on the numbers of people in those segments, it did not produce greater equity in use of health services or in health outcomes. This was because richer states, provinces, and municipalities were able to top up central government funding with their own revenues or from user charges. He further argues that in the poorer regions, people remained less healthy and less likely to have health insurance which led to publicly funded services being more heavily burdened.

According to Centellas, (2000) the best administrative and technical expertise were available in the wealthiest areas and served deprived areas only if given attractive incentive packages which in most cases were not sustainable. If this is to be mirrored Kenya, it is to be expected that more health workers would move to richer counties to set up private health services. Big private hospitals and top notch specialists in different areas of medicine would be crowded in such areas.

Populations in such areas will increasingly access services from the private sector leaving public facilities less congested and with better services. Poor counties would however continue to lack qualified health workers and populations would depend on public health facilities more. Other than county specific problems, other sector wide problems are also likely to arise. In Bolivia, devolution led to neglect of nationwide vertical disease control programmes with serious consequences, as exemplified by the world's first ever outbreak of urban yellow fever (Sandiford, 1999).

1.2. Problem Statement

In Kenya, healthcare services were devolved when the new county government came in power in March 4th 2013 following the promulgation of the new constitution on August 31st 2010. However, little seem to have been done to establish the effects of devolution on health care services in Kenya. Latin America, Chile, Brazil, Mexico, and Bolivia have all experimented with devolution of publicly funded health services. Just like in Kenya the motives for devolution in these countries were political and so little consideration was given to the possible impact on health systems. According to Waithaka (2013), health staff unrest has been witnessed since the advent of county governance affecting service delivery thus posing health risks to thousands of Kenyans needing

the service and scaring away potential investors (see Appendix 4). The national and county government together with the various development stakeholders appears to have paid little attention to these situations despite the fact that if it remains unchecked could jeopardize health service delivery in the county. It is against this backdrop that this study was conceived to fill in the knowledge gap by evaluating the effects of devolution on healthcare delivery in Nakuru County.

1.3. Objective of the Study

1.3.1. Main Objective of the Study

To evaluate the effects of devolution on healthcare delivery in Nakuru County

1.3.2. Specific Objectives of the Study

i. To examine the effects of devolution on health service delivery in Nakuru County.

ii. To evaluate the effects of devolution on health governance in Nakuru County.

iii. To identify the effects of devolution on health work force in Nakuru County.

iv. To evaluate the effects of devolution on health financing in Nakuru County.

1.4. Hypotheses

HO_1. Devolution of healthcare has no significant effect on health service delivery in Nakuru County.

HA_1. Devolution of healthcare has significant effect on health service delivery in Nakuru County.

HO_2. Devolution of healthcare has no significant effect on health governance in Nakuru County.

HA_2. Devolution of healthcare has significant effect on health governance in Nakuru County.

HO_3. Devolution of healthcare has no significant effect on health workforce in Nakuru County.

HA_3. Devolution of healthcare has significant effect on health workforce in Nakuru County.

HO_4. Devolution of healthcare has no significant effect on health care financing in Nakuru County.

HA_4. Devolution of healthcare has significant effect on health care financing in Nakuru County.

1.5. Justification of the Study

The findings from this study will assist the policymakers in formulating effective strategies and policies that will enhance healthcare delivery at the county and national level under the devolved systems. The study provides more information on areas for further research since devolution is a new concept in Kenya and despite other countries having devolved health systems; every country has its own unique challenges and opportunities. Both the county governments and national government can make use of the findings to come up with policies and strategic interventions to enhance service delivery to citizens.

1.6. Scope of the Study

The study was confined to Nakuru County, one of the forty-seven counties of the republic of Kenya provided in the constitution of Kenya 2010. The county covers an area of 7,495.1 Km^2 and lies within the Great Rift Valley bordering seven other counties. The population projection in 2012 was estimated at 1,756,956 with a population density of 234 per square kilometer. With a county population growth rate of 3.05% per annum the population is projected to increase further to 2,046,395 in 2017 assuming constant mortality and fertility rates. Nakuru County is divided into nine administrative sub-counties with a total of thirty one divisions and eleven constituencies. The county has five towns and one municipality with a total of fifty five electoral wards. The study will involve county health management team, Sub county management teams and facility management teams. In Nakuru County there are three hundred and seventy five service delivery[4] points and one hundred and eleven community units (CUS) that spread across the county (see Appendix 2), there are thirty seven non-operational service delivery points in the county. The study will only centre on one hundred and ninety six functional service delivery points that include hospitals, health centres and dispensaries in the county.

[4] This constitutes all government facilities, private clinics, hospitals, nursing homes and faith based health institutions within the county.

1.7. Limitation and Delimitation of the Study

This research was conducted, taking views of the supply side of the health care system. By design, all the participants were health care workers at various management levels it is therefore unlikely to be fully representative of the full effect of devolution, bearing in mind that health care workers went on strike a number of times, protesting devolution of health. On the other hand, obtaining input on the quality and delivery of health care services from the demand side or the consumers of health care would be valuable. Secondly, the research was conducted only two years after devolution of health and could possibly evaluate the processes rather than long-term effects/outcomes of devolution on health care. Additionally, this was more of a watershed period in which devolved structures were being set up and was marred with confusion between what was devolved and what function was under the central government.

1.8. Definition of Terms

Devolution: The constitution of Kenya defines devolution as the transfer of powers, responsibilities, functions and services (governance structures) from the national government to the county governments that elect their own governors and other leaders, raise their own revenues, and have independent authority to make investment decisions(The Kenyan Section of the International Commission of Jurist, 2013). This study will adopt the definition of devolution as according to the constitution of Kenya.

Health Systems: The World Health Organization (WHO) defines health systems as all the organizations, institutions, and resources that are devoted to producing health actions whose primary purpose is to improve health (World Health Organisation, 2001). Merson, Black, & Mills, (2006) describe health systems as the means where many of the programs and interventions are planned and delivered, they are a crucial influence on the extent to which countries are able to address their disease burden and improve overall levels of health and the health of particular groups in the population. The study will adopt the definition of the world health organization for the purposes of this study

Health Care Delivery: The prevention and management of disease, illness, injury, and other physical and mental impairments in individuals delivered by health care professionals through the health care system and can either be routine health services, or emergency health services(Ministry of Medical services & Ministry of Public Health and Sanitation, 2012). Merson et al, (2006) define

healthcare delivery as a system of institutions, people, technologies and resources designed to improve the health status of the population at any time. The Ministry of Medical services & Ministry of Public Health and Sanitation definition will be used for this study.

Health leadership and Governance: Leadership and governance ensures a comprehensive leadership that delivers on the health agenda through a process of competently directing health system resources, performance, and stakeholder participation toward the goal of saving lives and doing so in ways that are open, transparent, accountable, equitable, and responsive to the needs of the people (Berman & Bosset, 2010).

Health workforce: Michaud and Murray (2007), describe the health workforce as the health service providers and they include trained, untrained and informal sector health workers, such as practitioners of traditional medicine, community health workers, and volunteers. Also included is health management and support workers, those who help make the health system function but who do not provide health services directly. In this study the term health workforce and human resource for health will be used interchangeably.

Service delivery: According to Merson, Black, and Mills (2006) service delivery examines availability and access. That is availability of services to the proportion of people for whom sufficient resources have been made available, the ratio of human and material resources to the total population, and the proportion of facilities that offer specific resources, equipment and materials, and other health service delivery necessities. While access is the ability of a population to reach for or afford appropriate health services.

Stakeholder Partnership: Are all organizations and individuals who have a participatory interest in the work of the ministry of health and can affect and/or be affected by the ministry of health actions. These include individuals, households, communities, Non-state actors, community service organizations (CSOs), faith based organizations (FBOs)/ non-governmental organization (NGOs), private sector, and development partners, and State actors like government ministries and agencies (Shi & Singh, 2011). I will adapt the definition of Shi & Singh for this study.

CHAPTER TWO

LITERATURE REVIEW

2.1. Introduction

This chapter provides an insight to devolution of health care services; it examines devolution from a general perspective and devolution in the healthcare context through giving a brief overview of the current state of service delivery and also other areas of health that have been affected by devolution which include; leadership and governance, health workforce and healthcare financing. The chapter further reviews published work in this area of study and other countries that have devolved health services as means to strengthen their health care services.

2.2. Devolution

Devolution is one form of decentralization and refers to the transfer of public authority and resources including personnel from national to sub national jurisdiction (Muia, 2008). Musgrave, (1959) and Oates, (1972) argue that decentralization may improve governance in public service provision by improving the efficiency of resource allocation. Further, they observe that sub national governments are closer to the people than the central government and as a result have better knowledge about local preference. Local governance is therefore better placed to respond to the diverse needs of the local people. In addition, decentralization narrows down the social diversity and subsequently the variation in local preference, thus leading to reduced conflicts among communities.

Potter (2001) postulates four basic characteristics that devolved governments should embody. Firstly, the local units should have autonomy and independence from the center. Secondly, the units ought to have clear and legally recognized geographical boundaries over which to exercise authority and perform public functions. Thirdly, devolved units should assume a ‘corporate status’ or power, to raise sufficient resources to carry out functions. Lastly, the people or recipients of the services should perceive the local government as belonging to them. This according to Oloo, (2006), implies that in the provision of services, characteristics of devolution satisfy the needs and remain subject to the control, direction and influence of the locals.

Globally there seem to be a trend in devolution of authority. According to Agrawal and Ribot (2010), many countries in the world have increasingly adopted devolution as a strategy to improve governance and remedy institutional deficiencies that highly centralized governments have engendered. These deficiencies include bureaucratic inefficiencies, poor accountability and transparency, unequal distribution of resources and low levels of community participation in local development.

In Ethiopia, the concept of devolution was introduced in 1996 and seen as the primary strategy to improve healthcare delivery in Ethiopia. It formed part of a broader devolution strategy across different sectors of which healthcare was one. Devolution first took place at regional level and was further extended to the district, level in 2002. According El-Saharty, Kebede, Dubusho, and Siadat (2009), Ethiopia adopted, a four-tiered system of Health care facilities which consisted of national referral hospitals, regional referral hospitals, district hospitals and, lastly, primary healthcare facilities. Through this devolution mechanism, districts received block grants from regional government and they, in turn, were entitled to set their own priorities and determine further budget allocation to healthcare facilities based on local needs. Consequently the district levels were responsible for human resource management, health facility construction and supply chain processes. El-Saharty et al. (2009), report that impressive improvements of service delivery were observed despite some challenges in the initial stages.

The process of devolution in Bolivia was carried out through the law of popular participation (LLP). The genesis for passing this law in 1994 was for the push of democratization and the poor performance of the Bolivian economy (Centellas, 2000). According to Centellas, (2000) the law was part of a larger package of reforms aimed at fundamentally restructuring the Bolivian state in ways that are revolutionary and to change the constitution. Postero, (2006) argues that, the law of popular participation (LLP) was intended to correct several major problems that were the legacies of earlier government policies; one was the imbalance between rural and urban areas and lack of equilibrium of the state in terms of representation.

Devolution in Bolivia dramatically reshaped the political, economy and social reality of the country yielding greater equity in resource allocation through the introduction of various forms of capitation based funding, but this did not necessarily produce greater equity in use of health services or in health outcomes (Collins & Green, 2006). In Bolivia, devolution led to neglect of

nationwide vertical disease control programmes with serious consequences, as exemplified by the world's first ever outbreak of urban yellow fever.

Devolution was introduced in Uganda in 1997 under local government Act. The main focus was on education, health, and agricultural advisory services, as well as the management of natural resources in Uganda. In a case study examining decentralization in Uganda, Bashaasha, Mangheni and Nkonya, (2011) found that there was no improvement in health services with many health status indicators either stagnating or worsening. In general, decentralization of education and health services did not result in greater participation of the ordinary people and accountability of service providers to the community. Further, they argue that lack of community participation, inadequate financial and human resources, a narrow local tax base, a weak civil society, underscored the need to ameliorate them if devolution was to attain the anticipated results. The case study from Uganda cautions against the tendency to romanticize devolution as the new-found solution for past and current institutional and socio-economic distortions. It further argues that devolution can make state institutions more responsive to the needs of the communities only if it allows people to hold public servants accountable, or if it ensures community participation in the development process.

As is observed and implemented globally, the four options of decentralization in the name of de-concentration, delegation, devolution and privatization has been subjected to the political and administrative structure as well as ideological preferences prevailing in the country. However, studies have shown that understanding devolution of health system has more to do with devolution of functions and institutional structure, mechanisms to ensure community participation, distribution of finance at the local levels, approaches to planning, political leadership, status of inter-sectoral and inter-departmental coordination along with exogenous and endogenous variables of the system itself(Atienza, 2009).

According to Berman and Bosset, (2010) devolution was pursued for a variety of reasons: technical, political, and financial. On the technical side, it was recommended as a means to improve administrative and service delivery effectiveness. Politically, devolution usually seeks to increase local participation and autonomy, redistribute power, and reduce regional tensions. On the financial side, devolution is invoked as a means of increasing cost efficiency, giving local units greater control over resources and revenues, and sharpening accountability.

According to Sandiford (1999), in the health sector, when devolution has been pursued for technical reasons, it has been a major component of performance improvement efforts. In many countries, devolution along with health financing reform has featured in system reforms for at least the last three decades. He further adds that in countries where the political and financial purposes of devolution have been primary, the health sector has had to develop coping strategies to maintain services and progress toward health objectives.

As illustrated by Counttolenc (2012), many studies have shown the benefiting results of devolution, local governance and people's participation in the health system and its delivery. Studies from India and the UK have shown ample evidence of a positive impact in the process of public ownership, accountability and participation. Studies in African countries and Latin America have demonstrated favourable instances of the outcomes resulting from the devolution of health systems. Agrawal and Ribot (2010), assert that some of the advantages of devolution include develops leadership, promotes effective monitoring, supervision and control, generates interest among employees, promotes quick disposal of work and it lightens the work of the upper echelons in administration.

Health system reforms which uses devolution as a vehicle needs a devolved form of governance that not only aims at equity and efficiency in seclusion of democracy but also participation at the local level. In an India study, Collins and Green (2006) found that devolution was not just a mere change in the structures but also processes. Since redistribution of power and allocation of resources has always a political dimension to it, the usual forms of decentralization remain more of an administrative one without the real transfer of power for policy, legislation and budgetary freedom. Further, in their study they found out that India's health devolution experiment was successful, because power and resources to formulate the programs for future had been transferred to the local bodies. This made it a pioneer in the provision of public health services regarding fairness and distribution and has made India to be well known for its great achievements in the health front.

Some experiences though are not encouraging. In their study Bossert, Beauvais and Bowser (2007), reported that in the case of Philippines, it was observed that devolution in and of itself did not improve the efficiency, equity and effectiveness of the health sector. The Philippines experience demonstrates that authority should be shared between the centre and the local units in

order to achieve national health objectives and respond to local health needs. The study also found that reproductive health indicators have not made marked improvements since implementation of devolved health policies in 1993.

The health sector devolution policies have been implemented on a broad scale often in combination with health finance reform. This process of health sector reform has been touted as a key means of improving health sector performance and promoting social and economic development. However, some preliminary empirical studies by (Grundy, Healy, Gorgolon, & Sandig, 2003) indicate that results of health sector decentralization have been mixed at best. Atienza (2009) argue that beyond devolution reform itself, civil society participation and volunteerism are crucial in improving health service delivery in the Philippines. Moreover, civil society organizations have been instrumental in enhancing community participation in health service delivery. She further adds that non-government organizations (NGOs), people's organizations (POs) and socio-civic groups have the capacity to mobilize communities for health-related activities and social action, generate resources and organize communities around health and development issues.

The characteristic of devolution in the Kenyan context are reflected in the principles and objectives of devolution as stated in the Constitution. Key among these includes the presence of local units that have autonomy and independence from the centre, with clear and legally recognized geographical boundaries over which to exercise authority and perform public functions. According the Kenyan Section of the International Commission of Jurists, (2013), the units are also accorded corporate status and the power to raise sufficient resources to carry out their functions. In Kenya several principles need to be considered when implementing devolution, these are embedded in the three principles stated in Art. 175 of the Kenya Constitution 2010 which are; county governments shall be based on democratic principles and the separation of powers, county governments shall have reliable sources of revenue to enable them to govern and deliver services effectively and, finally, no more than two-thirds of the members of representative bodies in each county government shall be of the same gender.

It is important to note that the national and county governments are required to adhere to the national values and principles of governance as set out in Article 10 of the Kenyan Constitution 2010. It binds all State organs, State officers, public officers and all persons whenever any of them applies or interprets the Constitution; enacts, applies or interprets any law; or makes or implements public policy decisions. According to the constitution of Kenya 2010, the national values and

principles of governance include: patriotism, national unity, sharing and devolution of power, the rule of law, democracy and participation of the people; human dignity, equity, social justice, inclusiveness, equality, human rights, non-discrimination and protection of the marginalized; good governance, integrity, transparency and accountability; and sustainable development.

In the Kenyan context, devolution is meant to promote democratic and accountable exercise of power. This includes fostering national unity by recognizing diversity; giving powers of self-governance to the people and enhancing the participation of the people in the exercise of the powers of the state and in making decisions affecting them and also recognizes the right of communities to manage their own affairs and to further their development

2.3. Devolution of Healthcare Delivery

Globally, there has been a trend in the devolution of authority in healthcare. One can say that authority that was often sitting with one central ministry or department of health has devolved over time. This is well demonstrated in the constitution of Kenya 2010, which has placed greater importance on devolution of budgets and administrative functions with the intend of a more supple response to the needs of individuals who are more concerned with the provision of service than with the provider of service.

Health as a function is significant to the welfare and success of any nation, according to the World Bank (2012), the way a health sector is run fundamentally, determines the efficacy of the service delivery. It further enumerates that the function of devolution presents prospects and confronts to the health systems that together determine the efficiency of service delivery and the nature of the overall health system. In addition, as observed by Onyango, Cheluget, Akello, and Okari (2012), devolution is a partial, on-going process riffed with opportunity and shortcomings that entails a steady exploration for a well-organized balance between national routing and localized self-governance that allows people to decide the performance of a service delivery they wish for.

Kenya's health care services has remained largely centralized with decisions taken at ministry of health headquarters from where they were conveyed top-down through the provincial medical officers to the district level. According to the Kenya health policy 2012-2030, centralized functions at the headquarters included policy formulation, coordinating activities of all health players (government and non-governmental organizations), initiating and managing

implementation of policy changes on various issues including charging of user fees, and undertaking monitoring and evaluation of impact of policy changes at the district level.

The ministry of health through the various health sector strategic plans expressed commitment to devolution intended to provide increased authority for decision making, resource allocation, and management of health care to the district and facility levels. According to Wamai, (2013) in 1992 the MOH established the District Health Management Teams (DHMTs) and the District Health Management Boards (DHMBs) with the intension of bringing services close to the people and enhancing equitable distribution of resource. These teams were charged with managing public health services at the district level. Together, the DHMT and DHMB were supposed to provide management and supervisory support to lower level health facilities (sub-district hospitals, health centers, and dispensaries).

With the implementation of the new Kenyan constitution 2010, the above arrangement of the ministry of health changed. The fourth schedule of the constitution establishes the distribution of functions between the national government and the county governments. The government handles National referral health facilities and Health policy development, while county government handles county health services[5], including, county health facilities and pharmacies, ambulance services, promotion of primary health care, licensing and control of undertakings that sell food to the public.

In the devolved system, healthcare is organized in a four-tiered system as described in the Kenya health policy 2012-2030. According to the health policy 2012-2030, the lowest level is the community health services that is comprised of all community-based demand creation activities, that is, the identification of cases that need to be managed at higher levels of care. It further describes the community units as non-facility base, with their functions extensively described in the community strategy. On average, for every 5,000 population a community unit needs to be established. This translates to over 8,800 community units nationally.

[5] County health services include: County health facilities, sub county hospitals, rural health centers, dispensaries, rural health training and demonstration Centre's, rehabilitation and maintenance of county health facilities, medical equipment and machinery

Primary care services is the second lowest level from community health services; it's comprised of all dispensaries, health centers and maternity homes for both public and private providers. As described in the policy a dispensary should exist for every 10,000 persons on average. This should allow for an average of 30 dispensary outpatient visits per day for any services, if everyone in the catchment area is to visit a health facility at least once a year for any form of services (curative, preventive, or health promotion activities), as suggested in the Kenya Health Policy 2012-2017. Dispensary units are physical facilities, but in areas where populations are mobile and sparse such as in arid or semi-arid lands, mobile facilities would replace dispensaries as much as are rationally possible. The policy further stipulates that there should be an average population of 30,000 per health centre that allows for at least 4 deliveries per day, a workload that is fair on the system and staff. These estimates translate to a targeted 4,404 dispensaries and 1,468 health centers nationally (Ministry of Health, 2013).

The third level is the county referral services which consist of hospitals operating in, and managed by the county and are comprised of the former level four and district hospitals in the county and include public and private facilities. According to the KHSSPI 2013-2017 the hospitals will focus on management of referral care, and are of three types: primary, secondary, or tertiary referral units. The scope and complexity of services increase from primary to tertiary referral units. For primary referral facilities, a population of 100,000 is targeted for each primary level hospital, allowing for at least one complicated delivery per day a workload deemed fair on the system and staff (Ministry of Health, 2013). The ministry further approximates 440 County level primary hospitals across the Country.

The fourth and highest level as recognized in the health sector policy is the national referral service which is comprised of facilities that provide highly specialized services and includes all secondary and tertiary referral facilities (Ministry of Medical services & Ministry of Public Health and Sanitation, 2012). The secondary referral facilities are required to serve a population of approximately 1 million persons usually crossing a number of Counties. These facilities shall be managed jointly by the national and affected county governments, and will provide a higher level of specialized services, and provide clinical supervision and support to the primary referral facilities. The tertiary referral facilities finally would focus on highly specialized services, and serve a cross county population of approximately 5,000,000 persons.

According to Ministry of Medical services and Ministry of Public Health and Sanitation, (2012) the counties are responsible for three levels of care: community health services, primary care services and county referral services. The national government has the responsibility for national referral services. The national department of health headed by the cabinet secretary for health has the primary role of supporting counties in delivering healthcare services as well as to help lead, shape and support the national health care system.

Health care provisions within the devolved system of government come up against several obstacles. As argued by Mwamuye and Nyamu (2014) key among these challenges are uneven inter-county levels of development, unequal distribution of resources for health especially the distribution of health facilities, human resources, and poorly developed communication infrastructure. They further argue that, unevenly distributed across the country are poverty levels, the effect of which is to make health services largely inaccessible to a large chunk of the population that cannot afford the high out-of-pocket expenditures, which are known to be common in Kenya.

As argued by Omollo et al. (2010), devolution on one hand allows county governments the freedom to come up with innovative forms of health care delivery that suits their unique health needs, an ample capacity to determine their health system priorities, and the power to make independent decisions on subsector resource allocation and expenditure. On the other hand, devolving the health systems comes with other challenges like equity issues and preparedness. These issues must be addressed to ensure successful and sustainable health care services.

2.3.1. State of Service Delivery

As noted in the World Health Report (2000), the service delivery function of healthcare is the most familiar; the entire healthcare system is often identified with just service delivery. The report states that service delivery is the chief function for the healthcare needs to perform. According to Merson, Black, and Mills (2006) service delivery examines availability and access. That is availability of services to the proportion of people for whom sufficient resources have been made available, the ratio of human and material resources to the total population, and the proportion of facilities that offer specific resources, equipment and materials, and other health service delivery necessities. While access is the ability of a population to reach for or afford appropriate health services.

Turin (2010), states that access to health care varies widely throughout the country and is determined on numerous factors, though in particular, major divides exist between rural and urban communities, and between the moneyed elite and the poorer masses. According to report by the United Nations, (2010) in Kenya, the poorer masses those living below the national poverty line constitute approximately fifty two per cent of the population. Approximately seventy eight per cent of Kenyans live in rural areas, yet a disproportionate share of healthcare facilities are located in urban areas, and according to World Health Organization, (2012) those in rural areas often have to travel long distances, often on foot, to seek care. As stated by World Bank (2012), the index of access to health services (measuring the share of new-borns delivered at a health facility) in Kenya, speaks volumes to this disparity. For example, over eight in ten children born in Kirinyaga County, which is located in the central part of the country, are delivered in a health facility. In Wajir, which is located in one of the most remote and marginalized regions of the country, one child in twenty is born in a health facility.

In Nakuru County, there is low access to the health services in the county due to long proximity of the health facilities. According to the Ministry of devolution and planning (2013) 66.3% of the population travel for more than 5 km to access the nearest health facility. Further, accessibility is affected by poverty levels in the county and impassable roads to access health. The ministry further adds that, majority of the health facility lack adequate infrastructures, drugs and trained personnel to attend to some of the chronic illnesses. There is therefore the need to address poverty, inadequate medical facilities and personnel and high cost of medical services in order to promote accessibility and healthy living in the county. As of 2013, the emphasis was on reducing child mortality, promoting maternal health as well as mitigating the vulnerability of HIV/AIDs and other major diseases(Ministry of Devolution and Planning, 2013).

Devolution of health services comes at a time when Kenya is struggling to make considerable progress in the realization of some of the health Millennium Development Goals (MDGs. According to the National Coordination Agency for Population and Development (NCAPD), (2010) review of the health situation in Kenya, it revealed that there have been improvements in health status even though it has been very marginal in the past two decades and certain indicators have worsened as shown in Figure 2.1. The review notes that, geographical and gender differences in age-specific health indicators persist.

As can be seen from the Figure 1, Maternal Mortality Rate (MMR) and Neonatal Mortality Rate (NMR) have worsened over the past few decades, while Infant Mortality Rate (IMR) has only marginally improved. According to the Goverment of Kenya , (2010) disease burden as a result of malaria, tuberculosis and HIV/AIDS, which together account for almost 50 percent of all deaths in the country, have received the most attention, with the government and donors focusing on prevention, treatment and eradication efforts. While infectious diseases continue to be a burden to the Kenyan healthcare system, the incidence of non-infectious diseases such as diabetes, cancer, cardiovascular disease and high blood pressure are on the rise (Transparency International, 2011).

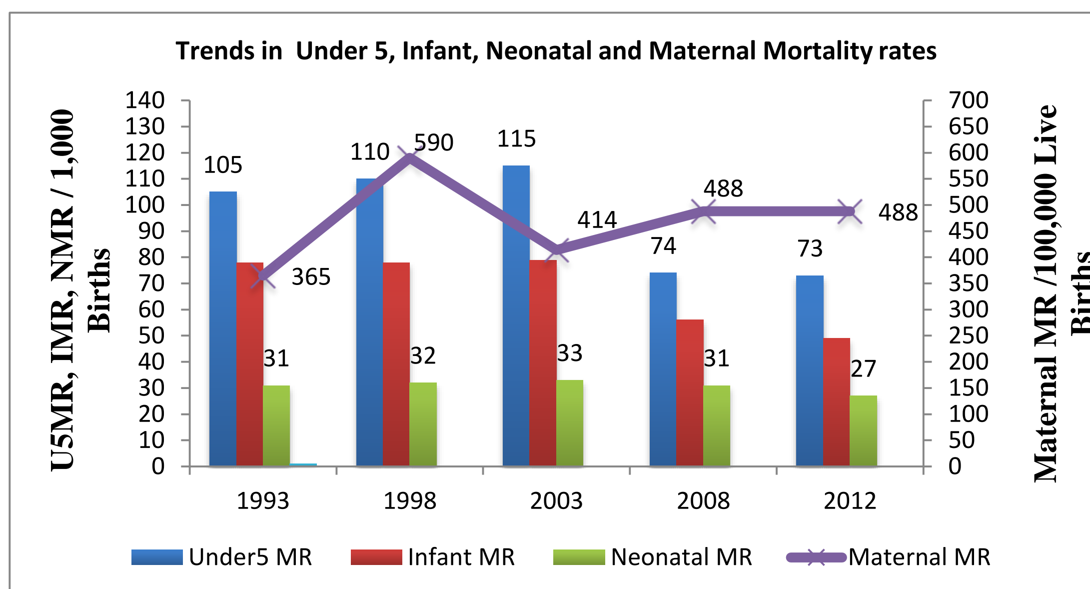

Figure 1: Trends in Mortality Rates

Source: Demographic Health Survey and United Nations Development Programme.

The aforementioned four tired system of delivery that was adopted with the implementation of the new constitution is hoped to address this challenges of service delivery by making services available and accessible to those areas in the country where services were not accessible.

2.3.2. Leadership and Governance.

As stated by Merson, Black, and Mills (2006) leadership and governance relates to some of the following function, management systems and functions, partnership and coordination of health care delivery, governance systems and functions, engaging of public and private services providers, planning and monitoring systems and services, health regulatory framework and services. Leadership and governance is a stewardship role by the management that harnesses all

the other building blocks into a functional health system. Stewardship ensures that there is a shared vision among all the key players and plays a coordination role to ensure the organizational objectives are achieved.

Kenya Health Policy 2012 – 2030 provides an institutional framework structure that specifies the new institutional and management arrangements required under the devolved system. The policy acknowledges the need for new governance and management arrangements at both levels of government. It outlines governance objectives as delivery of efficient, cost-effective and equitable health services, devolution of health service delivery, administration and management to the community level, stakeholder participation and accountability in health service delivery, administration and management, operational autonomy, efficient and cost-effective monitoring, evaluation, reviewing and reporting systems, smooth transition from current to proposed devolved arrangements, complementarities of efforts and interventions.

According to the Health sector function assignment and competency team, (2013) in the devolved system, the national department of health is organized in a manner that facilitates the sector to plan and monitor the attainment of health sector goal and targets. The fourth schedule of the constitution stipulates that the health sector senior management is responsible for operational priority setting, implementation follow up and monitoring processes. It comprises: the director general for health, heads of directorates (including administration, as representative of the principal secretary), heads of all sector departments, including those in semi-autonomous governments units (SAGA's) and heads of units. Each directorate has departments within them, aligned to addressing the health agenda as outlined in the Kenya health policy (2012-2030). Policy issues to be dealt with by each unit have been categorized into five broad thematic areas that include: curative and rehabilitative services, preventive and promotive services, standards and quality assurance, administrative and promotive services and finally, policy, planning and international health relations(Health Sector Function Assignment & Competency Team, 2013).

At the county level the constitution of Kenya 2010 provides that the county executive committee (CEC) member responsible for health shall be responsible for overall coordination and management of county health services including monitoring planning processes, formulation and adoption of policies and plans for county health services. It further adds that the county executive committee (CEC) shall determine the organization of the county and its various departments, and

for that purpose may determine the number and nature of departments at the decentralized units (County Government Act (CGA) 46(1) (b))(National Council for Law Reporting, 2010). Also the county government may, in order to promote efficient use of the county resources, adopt, subject to approval by the county assembly, a centralized county financial management service. The county structure is based on the County functions for health outlined in the Fourth Schedule of the Constitution and the health policy objectives. The County health services are managed by a chief officer for health who is recruited by the County public service board and appointed by the governor in accordance with Article 45 of the County Government Act.

Previous researchers in this field like Berman and Bosset (2010) have found, for health care interventions to work, decentralized local governments need effective policymaking, transparent rules and clear chain of commands. Also, open information, and active participation by all stakeholders in the health sector. The subject of integrity in governance would ensure a standard value of accountability and transparency in the health sector.

2.3.2. Health Workforce

According to Mills (2011), the HR function is important because it addresses an organization's or health system's need for a competent, stable workforce that meets its needs, i.e., having the right number of service providers with the right skills in the right locations at the right time.

As argued by Bossert and Beauvais (2002), control over human resource management in the health sector is a major factor in devolution that has far reaching effects on the health sector functions. They further argue that, because such a large percentage of health sector resources in developing countries goes to salaries and because personel management has a strong effect on local decision making, centralisation of human resources management tend to significantly undermine local decision space provided in the financing service organisation spheres and thus the need for decentralization.

Globally there has been a need for decentralization of the health workforce with the intent of improving the general healthcare delivery performances. Examples of some of the countries that devolved the human resource function include the Philippines and Uganda. According to Rondinelli (2010), Philippines and Uganda devolved the human resource function to the local government that had been given authority to hire and fire devolved personnel and this led to a de-

linkage between the local government and the national civil service. In both cases the political influence of public sector health workers brought about central imposition of salary level, benefits and employment condition. This represented a major constraint on the local decision space, not only in human resource per se, but also in an indirect effect on control of financial resources since human resources represents the highest percentage of recurrent cost and budget allocations. Kenya has followed on the same path of the Philippines and Uganda of devolving the health human resource function to the county level.

As outlined in the Constitution of Kenya, recruitment and hiring of staff for devolved functions are the counties' responsibilities. Each county has a public service which is tasked with appointing its public servants within a framework of uniform national standards prescribed by an Act of Parliament (Constitution of Kenya 2010, Article 235). In addition to appointing public servants, public service responsibilities include the establishment and abolishment of offices in its public service and disciplinary control and removal of persons acting in these offices.

The transfer of staff hiring and firing decisions to the county governments through the public service board is one of the major reforms seen in the health work reforms following the advent of the new constitution. This led to health workers strike and unrest as they protested against devolution of health to the county level (Kenya Medical, Pharmacists and Dentistry Union, 2013). Patients were reported to go without being attended to in public hospitals while some hospitals remained completely shut down thus posing health risks to thousands of Kenyans needing the service and scaring away potential investors thus posing a serious challenge to the sector (see Appendix 4).

According to Mshelia, et al. (2013) the single biggest barrier for countries in Sub-Saharan Africa (SSA) to scale up the necessary health services for addressing the health-related millennium development goals and achieving universal health coverage is the lack of an adequate and well-performing health workforce. This deficit in health workforce capacity needs to be addressed both by training more new health personnel and by improving the performance of the existing and future health workforce. However, simply increasing the number of health workers or improving workforce performance will not necessarily result in the improvement of health-related processes and outcomes unless the organizational context provides an enabling environment in which to carry out the healthcare activities.

Like most countries in Africa, the shortage of healthcare workers is not unique to Kenya. Indeed, Kenya is one of the countries identified by the WHO as having a critical shortage of healthcare workers. According to the health sector report (2013) Kenya had an average of 19 doctors and 173 nurses per 100,000 population, compared to WHO recommended minimum staffing levels of 36 and 356 doctors and nurses respectively. Regarding the optimal staff establishment, the sector would require 72,234 staff. As of 2012, the sector had an approved staff establishment of 59,667 but only about 49,096 positions were filled, leaving 10,371 positions vacant. This shortage was markedly worse in the rural areas where, as noted in study by Transparency International, (2011), under-staffing levels of between 50 and 80 per cent were documented at provincial and rural health facilities. Appendix 1 gives a summary of the available staff cadre in the country as at 2013 (Ministry of Medical Services and Ministry of Public Health and Sanitation 2013).

In Nakuru County, the health sector is experiencing same severe shortage of staff, the county has a total of 19 specialist, 10 dentist and 19 pharmacist all concentrated at the county referral hospital. According to the county register as at July 2014 (Appendix 3- health workers per sub county), the county had 197 doctors, 221 clinical officers and 1015 nurses. The Nakuru county referral hospital (formerly the provincial general hospital) holds more than half of these staffs with 447 nurses, 110 doctors and 65 clinical officers with Kuresoi Sub County having the least number of health staff at 53 nurses, 3 doctors and 6 clinical officer. As shown in appendix 5 the population projections per Sub County, as at 2009, Kuresoi Sub County had a population of 239485 and the projection at 2015 stands at 287577. What is encouraging is that following devolution it is hoped that this challenge of understaffing and unfair distribution of staff among others things will be addressed.

To retain a motivated, competent workforce, HR management must address the needs of the workforce. The key functions of HR include recruitment, selection, performance appraisal and management, compensation, development, and other related activities such as benefits, employee relations, and labor relations (WHO, 2006). It is the responsibility of the county government to ensure adequate and equitable distribution of human resources for health. Adequacy encompasses numbers, skills mix, competence, and attitudes of the health workforce required to deliver on the health goals.

2.3.3. Health Care Financing

According to the National Health Accounts, (2012), primary funding for healthcare comes from three sources: public, private (consumers) and donors. Consumers are the largest contributors, representing approximately 35.9 percent, followed by the government of Kenya and donors at 30 percent each. Over the past few years, government financing as a percentage of GDP has been consistent at slightly above four percent. A regional comparison of the total health budget as a percentage of GDP shows that Kenya ranks last, behind Rwanda, Tanzania and Uganda (Figure 2) (World Bank, 2012).

As a signatory to the 2001 Abuja Declaration, Kenya committed to allocating at least 15 percent of its national budget to health. Not only is Kenya spending a relatively low amount as a percentage of GDP on healthcare, but the allocation of funds to public facilities has been uneven (Health Sector Report, 2012). According to a 2011 health action report, secondary and tertiary facilities have historically been allocated 70 percent of the health budget. The same report notes that allocation of funds to primary care facilities has been poor despite the significant role these facilities play as the first point of contact in the provision of healthcare services.

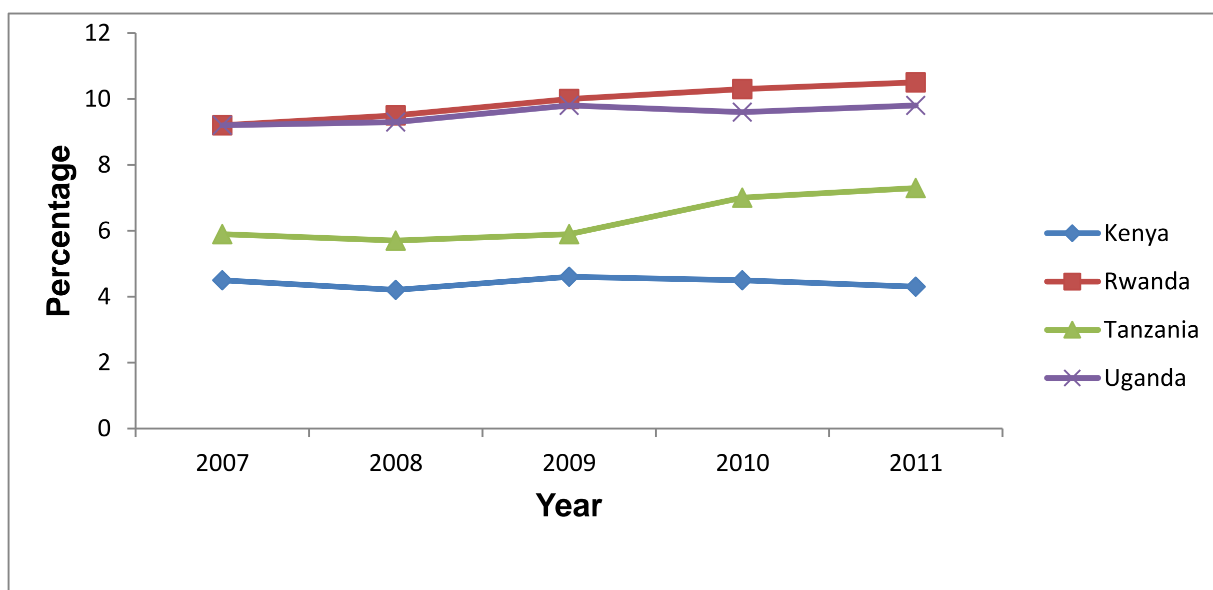

Figure 2: Regional Comparison of Total Health Budget as a Percentage of GDP

Source: World Bank 2012

With the current system of devolved government, funding for county level functions is primarily from the national government. According to the Constitution of Kenya Fourth Schedule, (2010) there are four main sources of financing to the County governments. Firstly, counties generate own

revenues from property taxes, business licenses, entertainment taxes. The second is equitable share from the national government of not less than 15 per cent of national revenue. Thirdly, equalization funds set aside for marginalized communities, representing an additional 0.5 per cent of national revenue. The fourth source is the conditional and unconditional grants from the national government. The revenue allocation formula as presented by the Commission on Revenue Allocation (CRA) takes into account the following parameters: county population, poverty level, land area, basic equal share and fiscal responsibility.

2.4. Empirical Review

This part of the study forms a selected summary of what several scholars have contributed in the field of devolution relevant to this study.

2.4.1 Devolution and Health Equity

Equity is implicit in the principles of devolution and is considered as an alternative to centralization, which overlooks addressing the needs of specific population groups. The delegation of responsibility, authority and resources to the subordinate levels is said to facilitate better response to local needs. Potter (2001), argues that devolution enables greater participation of people, development, planning and administration in a more equal distribution of benefits of economic. However, with special reference to the health sector, devolution is meant to increase allocative and technical efficiency, local revenue raising, community participation and self-reliance.

In an empirical study, Collins and Green (2006) enumerate several factors that determine how devolution influences equity they include central grant, expenditure and taxation effects. They further state that there is no obvious generalization that maybe forthcoming about the impact of devolution on aggregate inequality since the impact of various factors may work in different directions. Often on a balance, the aggregate inequality is likely to be predominated by worsening interregional equity largely because of the absence of effective central redistributive policies. The central government may undertake the substantive schemes of redistribution through grants, which favour local government in the poorer part of the country.

In a case study examining the effect devolution on equity carried out in Mexico by Gonzalez (2009) where devolution in one state was compared with a more centralized provision of health

care in another state it showed that while overall service provision increased in the former, it moved towards inequities in the other. On the other hand, in china, after devolution, the hospitals entered into competition for acquisition of more advanced technology in a bid to get more business. This, according to Bloom and Xingyuan (1997) increased the cost of health care; hence, poor households spent almost 60% of their annual net income on an average on hospital admission.

According to Mills (2008), a common aim of devolution is to bring government closer to the people and encourage community involvement. Community involvement in the management of the health facilities seem to be emerging as an important aspect of health systems in many African countries. Smith (1997) postulates that decentralization of this kind may combine the management of services with the organization of productive activity. The exercise of influence on planners and decision-makers responsible for the allocation of resources. Participation in the management of hospitals through community involvement has been found to improve performance by strengthening the accountability of providers to the clients. On the other hand, community representatives face severe problems in talking to professional representatives on equal terms because of the latter' superior professional knowledge (Smith, 1997). Thus, Mills (2008) asserts that it is very difficult to set up a decision -making structure of this hybrid form that ensures fair and equal representation of both community and professional viewpoint.

A further danger of devolution and complementary policies for community participation as argued by Oates, (1999) may be that those who gain influence at local levels do not use it in best interest of the community at large. This happened in India in the early stages of the development of health boards in autonomous hospitals resulting in their capture by local magnets and dominated by influential groups in power and hierarchy. Specific areas were entrusted to the local self-government which included health and sanitation, hospitals, primary health, dispensaries, family welfare, housing and drinking water (Bloom & Xingyuan, 1997). These institutions received adequate funds to carry out functions through grants from the state governments and a share of certain taxes, but the intended beneficiaries of devolution did not feel the impact.

2.5. Conceptual framework

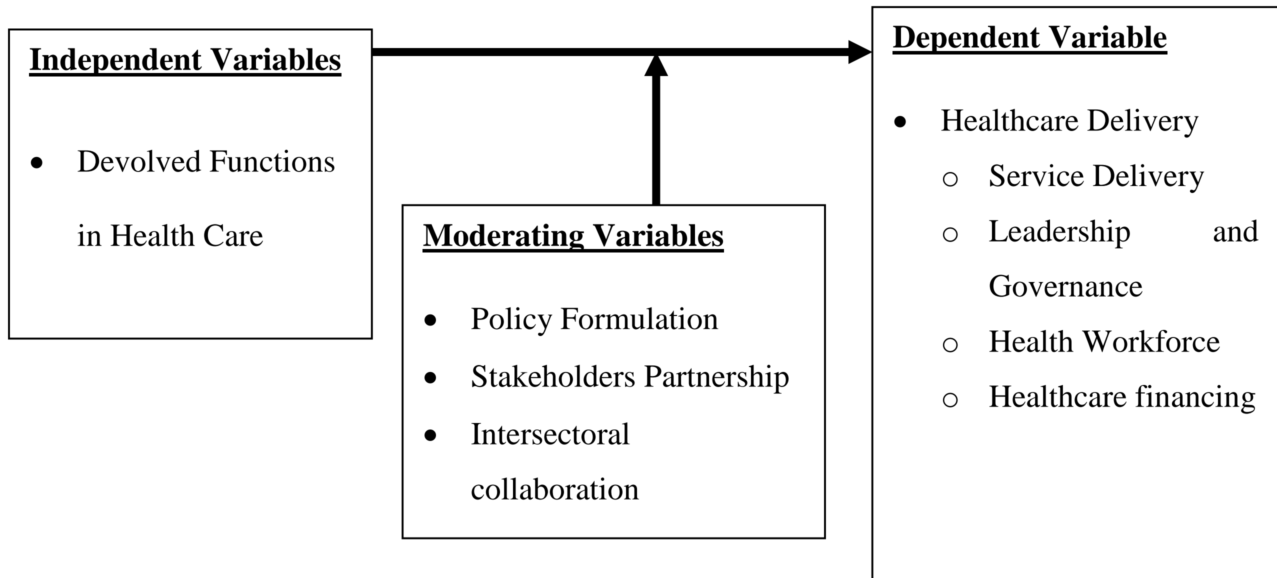

Figure 3: Conceptual framework

Source: Researcher, 2014.

Figure 3 shows the relationship between the independent variables and the dependent variable. The independent variable is devolution, which influences the dependent variables. The dependent variables are the areas of healthcare delivery that have been devolved and include service delivery, leadership and governance, health workforce and health care financing. Service delivery was measured by rating the performance of various domains in service delivery before and after devolution. It was also be measured by how services have been made accessible through provision of resources, upgrading the capacity of existing facilities and establishment of new facilities.

Leadership and governance was measured by testing the awareness of the respondent on the county strategic plan. The respondents also rated different areas of leadership and governance, like intersectoral collaboration and stakeholder participation, before and after devolution to assess the effect of devolution on leadership and governance in ensuring a comprehensive leadership that delivers on the agenda of health through a process of competently directing healthcare resources.

Another dependent variable, health workforce was measured by asking the respondent to rate the management of human resources on areas such as, motivation, addressing health staff shortage, recruitment, hiring, posting, remuneration and promotions that would enable the county health sector to maintain a motivated and effective health workforce.

Health care financing as a dependent variable was measured by existing policies, mechanisms and systems to raise and monitor funds for the county to ensure availability and accountability of resources.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1. Introduction

This chapter explains the methodology that was used in conducting the research. It identifies and justifies the research design, the population, the sampling procedure and sample size. In addition it describes the instrument used in data collection, its validity and reliability. It concludes with detailed data collection procedure and the statistical approach to analysis.

3.2. Research design

The study is a quasi-experimental research design. A quasi-experimental study is a type of evaluation which aims at determining whether a program or intervention has the intended effect on the study participants. In this design, the dependent variables are exposed to some intervention (in this case devolution) as illustrated in Figure 4. The study assessed health workers thoughts, opinions and feelings about the state of health comparing the period before and after the devolution of health functions from the national government to the county government.

Quasi-experimental studies take on many forms, according to Graziano (2007), one of the most common form of a quasi-experimental study includes a pre-post-test design. A pre-post-test design requires that data is collected on study participants' level of performance before the intervention took place (pre-), and after the intervention took place (post-). The pre-post-test design allows a researcher to make inferences on the effect of the intervention by looking at the measurements before and after the intervention.

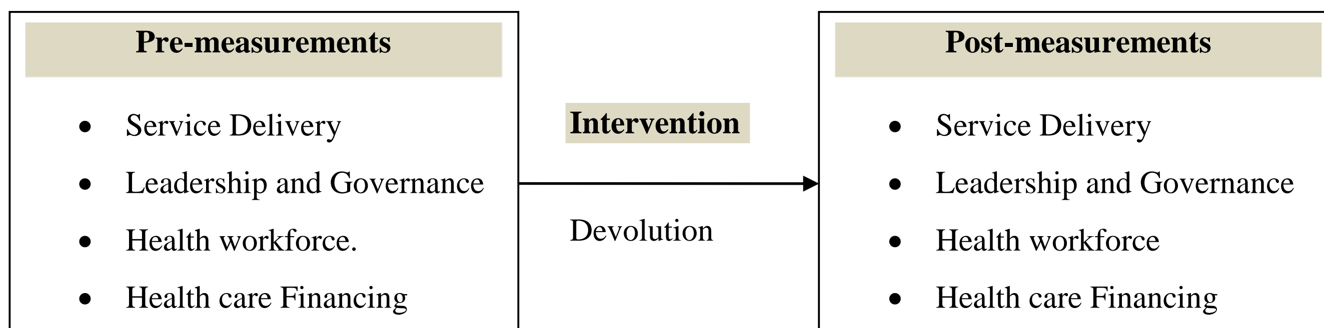

Figure 4: A Pre-Post-Test Design

3.3. Study Population

A study population can be defined as the entire group of individuals, events or objects having common observable characteristic, from which the study subjects are drawn (Dohoo, Martin, & Stryhn, 2012). The target population for this study was 284 healthcare workers in the county government of Nakuru. For practical purposes however, the study considered those employees in management positions since they possess information relevant to the study. They comprised the county health management team, sub county health management team and facility health managers.

3.4. Sampling Procedures and Sample Size.

Stratified sampling method was used. According to Kothari (2004), it provides a more reliable and detailed information. There are 16 members at the county management level, 72 members at the sub-county management level[6] and 196[7] at the facility management level making 284 health managers. The sample size was calculated using the formula below (Nassiuma, 2000)

$$\mathrm{n} = \frac{\mathrm{NC}^2}{C^2 + (N-1)e^2}$$

Where, n = Sample size, N= Population, C= coefficient of variation, e = Standard error. Nassiuma (2000), asserts that in most surveys a coefficient of variation in the range of $21\% \leq C \leq 30\%$ and a standard error of $2\% \leq e \leq 5\%$ are usually acceptable. The study therefore used a coefficient variation of 21% and a standard error of 2%. The lower limit for coefficient of variation and standard error was selected so as to ensure low variability in the sample and minimize error. To be able to choose participants for the study stratified proportionate sampling procedure was used.

$\mathrm{n} = \frac{284(0.21)^2}{0.21^2 + (284-1)\,0.02^2} = 79.608$ n=80 respondents

Table 3.1 shows the level of management and representation.

[6] Each sub county (9 in number) consists of 8 members of the health sub county management team.
[7] This only constitutes operational government facilities as at January 2014. It excludes privates clinics, hospital, nursing homes, faith based health institutions and non-operations facilities.

Table 3.1 Sample Representation

Level of Management	Number of Respondent (N)	Sample size $(\frac{n}{N})$	Percentage (%) $\frac{sss}{n}*100$
County Health Management	16	5	6.25%
Sub County Health Management	72	20	25%
Facility Managers	196	55	68.75%
Total	284	80	100%

3.5. Research Instruments

Data was collected using questionnaires structured around the study objectives. Both open ended and closed ended questions were used. A questionnaire was preferred in this study because it provided an opportunity for the respondent to explain, and if possible, make further suggestions to the topic under study. Responses were measured on an ordinal (Likert) scale for the closed ended.

3.6. Validity and Reliability of the Instrument

To ensure validity and reliability of the measuring instrument careful wording, format and content were used. The instrument was piloted in Subukia Sub County which was not part of the actual study. This was done to check the understand ability of the questionnaire and its ability to collect the desired information. As an added reliability measure, the cronchbach's alpha method was used. The calculated cronchbach's alpha for the depended variables was about 0.8936 that is above the accepted reliability threshold of 0.70. This assured validity and reliability of the questionnaire.

3.7. Data Analysis

The dataset contained baseline characteristics of the respondents such as gender, professional cadre and their level of management. One question was open-ended and the responses were analyzed qualitatively using thematic content analysis. The other questions were categorical, including a few dichotomous variables and ordinal responses on a Likert scale. The baseline characteristics and the dichotomous responses were analyzed descriptively. Categorical variables were analyzed using Chi-square test of independence or Fisher's exact test where the expected frequencies were

less than five in more than 20% of the cells. A Chi-square test was deemed appropriate to test the significance of the relationship between the performance of various health system functions (ordinal responses/variables) and the period before and after devolution.

The two variables of interest were the period before and period after devolution (labeled 'before' and 'after' respectively).The null hypothesis tested that there was no relationship between these periods. For each question a two by five contingency table was constructed showing the responses/rating. Expected frequencies for every cell were calculated and thereafter a chi-square statistic carried out.

CHAPTER FOUR

ANALYSIS AND PRESENTATION OF RESULTS

4.1 Introduction

The main objective of the study was to analyse the effects of devolution on healthcare delivery in Nakuru County. This was guided by the hypotheses on whether there is statistically significant difference in the period before and after devolution of healthcare delivery in Nakuru County.

4.2. Descriptive Statistics

4.2.1. Baseline Characteristics of the Respondents

A total of 20 questionnaires were administered directly by the interviewer while 72 questionnaires were mailed to respondents. Among the mailed questionnaires, 60 were returned (83% response rate). The respondents were male and female health care workers (HCWs) from different cadres (see figure 4.1). Among the interviewed health care workers, five (6.2%) were members of the county health management team (CHMT), 20 (25%) were in the sub-county Health management team (SCHMT), 55 (68.8%) were officers in charge of health facilities and service providers with managerial roles.

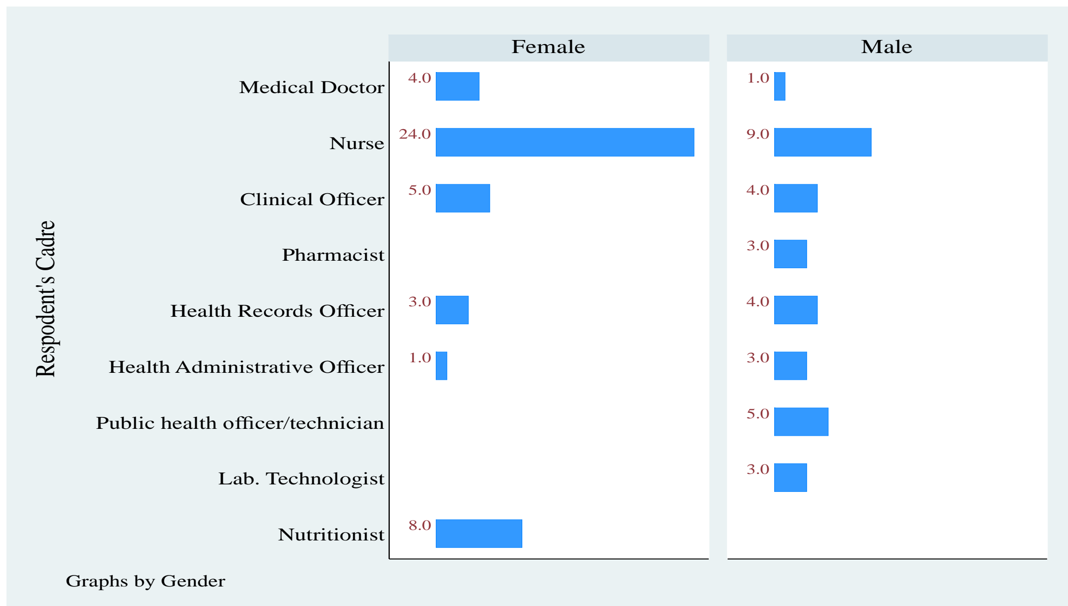

Figure 5: Description of Respondents by Cadre and Gender

From figure 5, majority of the respondents were nurses followed by clinical officers. These are the personnel who play a major role in the health care system.

4.2.2. Challenges Facing Health Service Delivery

When the respondents were asked to identify the key challenges facing delivery of quality health services under the devolved system, the most common challenge identified by 57 (71%) of respondent was shortage of HCWs. The second was shortage of essential medical supplies and equipment; (53% of respondents), followed by inadequate resources and delayed disbursement of funds (49% of the respondents).

Other key challenges were; staff demotivation and intimidation (41%), delayed staff salaries (21%), poor planning or prioritization of needs (15%), political interferences in delivery of health services (9%). A few of the respondents also mentioned disconnect between the two levels of government, corruption or misappropriation of health resources, poor health infrastructure, and poor working conditions and lack of clear organization structures. These results show that there are multitudes of problems facing healthcare delivery in the counties.

Despite the challenges identified, majority of the respondents (72.5%) did not know of any concrete plans to address them or improve quality of health services while only 13 (16.3%) of the respondents thought that there were such plans. The rest (11.2%) did not answer the question. These results indicate that there is no shared vision between the county government and its employees. As can be seen the rate of inclusion and involvement at all levels to enhance service delivery speaks volumes to this disparity. For instance, the responses varied across the positions held by the health care workers. Majority (80%) of CHMT members said that there were plans to address the challenges while only 15.6% of facility managers thought there were not any plans at all.

Majority (85%) of the respondents said that the devolved structures have not created enough resources for delivery of essential health services. The findings are in line with what happened in Phillipines, according to Bossert and Beauvais (2002) the government introduced devolution of health services. The aim was to improve management of services and make them more available to the people. What followed however was falling quality and coverage of health services in rural and remote areas, the opposite of what devolution was meant to achieve. They further state that

five years after devolution, there was a breakdown in management systems between national and local levels of government, poor staff morale, a decline in maintenance of infrastructure and under financing of operational costs of services. The government of Philippines was forced to review the policy. From the study the Philippines history seem to be repeating itself in Kenya.

4.3 Inferential Statistics

4.3.1. Delivery of Health Services Before and After Devolution

Table 4.1: Health service delivery before & after devolution

Health service delivery	Period	V. Poor Freq. (%)	Poor Freq. (%)	Neutral Freq. (%)	Good Freq. (%)	V. Good Freq. (%)	Chi-statistic (P Value)
i. Patient referral system	Before	5 (6.6)	19 (25)	26 (34.2)	21 (27.6)	5 (6.6)	4.0 (P=0.4)
	After	9 (11.5)	20 (25.6)	32 (41)	15 (19.2)	2 (2.6)	
ii. Service to the marginalized and vulnerable populations	Before	4 (5.1)	12 (15.4)	43 (55.1)	18 (23.1)	1 (1.3)	11.2
	After	15 (19.5)	17 (22.1)	33 (42.9)	10 (13)	2 (2.6)	(P=0.017)
iii. Equipping Health facilities	Before	1 (1.3)	21 (26.9)	28 (35.9)	25 (32.1)	3 (3.9)	
	After	14 (18)	25 (32)	29 (37.2)	9 (11.5)	1 (1.3)	20.2 (P<0.001)
iv. Supply of essential drugs and health commodities	Before	1 (1.3)	10 (12.8)	27 (34.6)	34 (43.6)	6 (7.7)	24.2
	After	8 (10.3)	27 (34.6)	27 (34.6)	12 (15.4)	4 (6.4)	(P<0.001)
v. Provision of emergency services	Before	5 (6.4)	16 (20.5)	37 (47.4)	16 (20.5)	4 (5.1)	11.1
	After	12 (15.2)	28 (35.4)	30 (38)	7 (8.9)	2 (2.5)	(P=0.024)
vi. Emergency preparedness	Before	9 (11.4)	16 (20.3)	34 (43)	18 (22.9)	2 (2.5)	17.7
	After	18 (22.8)	33 (41.8)	20 (25.3)	7 (8.9)	1 (1.3)	(P=0.001)
vii. Medical evacuation services	Before	9 (11.5)	18 (23.1)	32 (41)	19 (24.4)	0	10.8 (P
	After	17 (21.5)	31 (39.2)	20 (25.3)	11 (13.9)	0	=0.013)
viii. Coordination of outreach services	Before	2 (2.4)	15 (19.5)	37 (48.1)	20 (26)	3 (3.9)	9.3 (P
	After	20 (25.7)	23 (29.5)	21 (26.9)	13 (16.7)	1 (1.3)	=0.046)
ix. Vehicle maintenance	Before	4 (5.2)	12 (15.6)	31 (40.3)	25 (32.5)	5 (6.5)	22.5
	After	12 (15.8)	34 (44.7)	19 (25)	10 (13.2)	1 (1.3)	(P<0.001)

The values in parenthesis are P Values for x^2 distribution representing differences between health service for the period before and after devolution of health care.

Delivery of health services is a core health systems building block. It is a building block that is at the end of the chain and is the lens through which the other blocks are seen. It is the end product of a well-coordinated health system. Human resources, health financing and the leadership and governance directly influence service delivery such that their reflects directly on the quality of health services rendered to clients.

In determining delivery of health services respondents were asked to indicate their level of agreement on the referral system, service to the marginalized and vulnerable populations, equipping health services, supply of essential drugs and health commodities, Provision of emergency services, emergency preparedness, medical evacuation services, coordination of outreach services, and vehicle maintenance.

From the results, patient referral system entailed communication and commitment of resources between levels of service delivery to facilitate referral of complicated cases for specialized care at the next level of service delivery. Slightly more respondents gave a poorer score to patient referral system after devolution of health (37%) compared to 31.6% before devolution. The referral services were however not significantly different between the two periods (P=0.4).

On provision of services to the marginalized and vulnerable populations, before devolution, 20% of the respondents gave either a poor or very poor score while 24.4% scored either good and very good compared to 37% who scored poor or very poor, and 15.6% scoring between it good or very good after devolution. The difference in the scores was statistically significant (P=0.017), indicating worsening of services after devolution.

Equipping facilities and provision of essential drugs and health products were significantly poorer after devolution P<0.001. In the period before devolution, 43.6% of respondents rated the supply of essential drugs as good compared to 15% after devolution. The corollary was also true, with a higher proportion of respondents (44.9%) rating the services as poor or very poor after devolution compared to 14.1% before devolution.

The ratings of emergency preparedness, provision of emergency medical care and evacuation services all deteriorated after devolution of health care. All these services had a significantly poorer rating (P<0.05) after devolution. Whereas 25% of the respondents returned a good or very good score for the provision of emergency medical care before devolution, only 11% rated it so after devolution. Though 31.7% of the respondents gave a poor or very poor score for emergency

preparedness before devolution, the score worsened to 60.7% after devolution and more respondents opined the service was worse.

Lastly, coordination of outreach services ($P=0.046$) as well as maintenance of utility vehicles for this purpose ($P<0.001$) was significantly worse after devolution, with more respondents returning a poor and very poor verdict.

The findings on health service delivery contradicts the objective of the aforementioned four tired system of delivery that was adapted with the implementation of the new constitution that was to address the challenge of service delivery by making services available and accessible to every part of the country.

4.3.2 Leadership & Governance

Leadership and governance is a stewardship role by the management that harnesses all the other building blocks into a functional health system. Stewardship ensures that there is a shared vision among all the key players and plays a coordination role to ensure the organizational objectives are achieved.

Out of the 78 participants majority (63%) were not aware of the existence of a county health strategic and investment plan (CHSIP). However, all the members of the CHMT and 58% of the SCHMT members were aware of the strategic plan. At the facility level, only 17% of the managers were aware. Even those who knew of the existence of a CHSIP, only nine (31%) knew its implementation period. This shows failure in the management arrangements required under the devolved system where the policy acknowledges the need for new governance and management arrangements at all levels.

Overall, the rating of leadership and governance structures in the devolved system was poorer compared to the period before devolution. The rating of good/very good almost halved after devolution (44% before devolution Vs. 23% after devolution) while the poor ratings tripled (13% before devolution vs. 42% after devolution). Health sector governance and popular participation at the local level are important elements of decentralization because the influence held by various stakeholders over decision process could express local priorities with national priorities and can be a means of holding the local health staff accountable for higher quality care.

Table 4.2 Leadership and Governance in health before and after devolution

	Period	V. Poor Freq. (%)	Poor Freq. (%)	Neutral Freq. (%)	Good Freq. (%)	V. Good Freq. (%)	Chi-statistic (*P Value)
i. Leadership and governance in health care	Before	0	10 (13.3)	32 (42.7)	31 (41.3)	2 (2.7)	20.8
	After	13 (17.1)	19 (25)	26 (34.2)	17 (22.4)	1 (1.3)	(P<0.001)
ii. Communication channels	Before	1 (1.3)	8 (10.7)	23 (30.6)	38 (50.7)	5 (6.7)	33.9
	After	9 (11.8)	28 (36.8)	26 (34.2)	11 (14.5)	2 (2.6)	(P<0.001)
iii. Support supervision by the Provincial/County HMTs	Before	0	5 (7)	25 (35.2)	18 (24.7)	1 (1.4)	29.9
	After	8 (11)	24 (32.9)	23 (31.5)	18 (24.7)	0	(P<0.001)
iv. Support supervision by the District HMTs/sub-County	Before	0	2 (2.7)	29 (39.7)	37 (50.7)	5 (6.9)	26.9
	After	8 (10.7)	17 (22.7)	28 (37.3)	21 (28)	1 (1.3)	(P<0.001)
v. Definition or roles for HMTs	Before	0	5 (6.9)	18 (25)	43 (59.7)	6 (8.3)	35.6
	After	9 (12.5)	25 (34.7)	19 (26.4)	17 (23.6)	2 (2.9)	(P<0.001)
vi. Administration of budgets by HMTs	Before	1 (1.3)	9 (12)	32 (42.7)	32 (42.7)	1 (1.3)	24.4
	After	15 (20)	20 (26.7)	25 (33.3)	15 (20)	0	(P<0.001)
vii. Handling of personnel issues by the HMTs	Before	5 (6.7)	9 (12)	25 (33.3)	32 (42.7)	4 (5.3)	43.0
	After	24 (31.6)	24 (31.6)	23 (30.3)	5 (6.6)	0	(P<0.001)
viii. Purchase of drugs and equipment	Before	2 (2.7)	13 (17.30	27 (360	29 (38.7)	4 (5.3)	21.2
	After	13 (17.10	24 (31.6)	27 (35.5)	11 (14.5)	1 (1.3)	(P<0.001)
ix. Needs assessment for infrastructure	Before	3 (4)	17 (22.7)	26 (34.7)	27 (36)	2 (2.7)	20.3
	After	12 (15.8)	34 (44.7)	19 (25)	10 (13.2)	1 (1.3)	(P<0.001)

The values in parenthesis are P Values represent differences between the distributions for the period before and after devolution of health care.

Communication between service delivery points is essential for airing of grievances as well as delivering policy guidelines and performance feedbacks. The communication channels were significantly different before and after devolution (P<0.001). Whereas before devolution 57% of the respondents were satisfied with the communication channels, only 17% were, after devolution. 48% of respondents rated communication poor after devolution compared to 12% before devolution.

Supportive supervision is a function of the health management teams (HMTs). The quality of supervision by either the CHMT or the SCHMT was significantly poorer compared by the period

before devolution ($P<0.001$), when it was carried out by the provincial health management team (PHMT) and district health management teams (DHMTs).

Infrastructural needs assessment and prioritization is an essential role of the HMTs to ensure appropriation of resources and prioritization of interventions to meet the needs of the consumers of health care. After devolution, majority of the respondents (60%) thought there was a deterioration of this function compared to 27% before devolution. Whilst 39% of the respondents rated this as functioning well before devolution, only 14% rated it so after devolution. This shows that there is no involvement of the community in the needs and prioritization. Participation in the management of hospitals through community involvement would help to improve performance by strengthening the accountability of providers to the clients.

The study shows deterioration in leadership and governance after devolution. This is in agreement with previous researchers in this field like Berman and Bosset (2010) who postulated that for health care interventions to work, devolved local governments will need effective policymaking, transparent rules and clear chain of commands. Also, open information, and active participation at all levels of leadership and governance in the health sector.

4.3.3 Management human resource for health

The human resources for health can be viewed as the implementation arm or the building block that puts all the others into action. The staffs provide health services but needs a well-coordinated management structure, a supportive environment and uninterrupted supply of medicines and other health commodities.

Staff shortage can adversely affect the quality of health services. Majority of the respondents (65%) opined that the systems to address shortage of health care workers was worse following devolution of health compared to 26% that held a similar opinion before devolution. Only seven (9%) of the respondents gave a good rating for the measures in place after devolution compared to18 (23%) before devolution.

Staff motivation through either continuous professional development or merit-based promotions and other non-financial incentives was rated better in the period before, than after devolution. While over 30% of respondents rated staff motivation as good before devolution, this percentage was barely 10% after devolution. The differences were statistically significant ($P<0.001$). This shows a poorly motivated health workforce that filters the weight of the intended purpose of devolution.

Table 4.3 Analysis of the management of human resources for health before and after devolution

Human resources for health	**Period**	**V. Poor** Freq. (%)	**Poor** Freq. (%)	**Neutral** Freq. (%)	**Good** Freq. (%)	**V. Good** Freq. (%)	**Chi-statistic (*P Value)**
i. Specific measures to address staff shortage	Before	4 (5.3)	16 (21.1)	38 (50)	17 (22.4)	1 (1.3)	26.9
	After	23 (29.9)	27 (35.1)	20 (26)	7 (9.1)	0	(P<0.001)
ii. Staff motivation through continuous professional development	Before	2 (2.6)	13 (16.9)	33 (42.9)	26 (33.8)	3 (3.9)	44.4
	After	31 (40.3)	21 (27.3)	16 (20.80	7 (9.1)	2 (2.6)	(P<0.001)
iii. Staff motivation through merit-based promotions	Before	2 (2.70	16 (21.3)	31 (41.3)	25 (33.3)	1 (1.3)	60.4
	After	40 (52)	22 (28.60	10 (13)	5 (6.5)	0	(P<0.001)
iv. Staffing needs assessment and postings	Before	3 (3.90	15 (19.5)	35 (45.5)	20 (26)	4 (5.2)	41.7
	After	27 (34.6)	26 (33.30	22 (28.2)	3 (3.9)	0	(P<0.001)
v. Dissemination of health policy guidelines	Before	0	8 (10.4)	30 (390	37 (48.10	2 (2.6)	34.5
	After	11 (14.3)	25 (32.5)	29 (37.7)	12 (15.6)	0	(P<0.001)
vi. Appropriate remuneration for health workers	Before	3 (4)	18 (24)	24 (32)	24 (32)	6 (8)	35.7
	After	28 (36.4)	25 (32.5)	14 (18.2)	10 (130	0	(P<0.001)
vii. Pay-roll management and timely payment of salaries	Before	2 (2.6)	6 (7.8)	17 (22.1)	35 (45.5)	17 (22.1)	63.1
	After	33 (42.3)	21 (26.9)	13 (16.7)	8 (10.3)	3 (3.9)	(P<0.001)
viii. Use of incentives for staff working in hard to reach areas	Before	3 (4)	17 (22.4)	20 (26.3)	31 (40.8)	5 (6.6)	56.9
	After	35 (45.5)	27 (35.1)	10 (13)	3 (3.9)	2 (2.6)	(P<0.001)
ix. Use of non-financial incentives for staff motivation	Before	8 (10.40	22 (28.6)	24 (31.2)	18 (23.4)	5 (6.5)	35.2
	After	38 (49.4)	22 (28.6)	10 (13)	7 (9.1)	0	(P<0.001)
x. Assessment of the work environment	Before	4 (5.2)	7 (9.1)	27 (35.1)	33 (42.9)	6 (7.8)	42.3
	After	32 (41.6)	15 (19.50	18 (23.4)	12 (15.6)	0	(P<0.001)

The values in parenthesis are P Values represent differences between the distributions for the period before and after devolution of health care.

Mechanisms for dissemination of health policies were rated better before devolution (51%) than after devolution (16%). Payroll management and timely payment of staff salaries was significantly different between the before and after devolution (P<0.001). 67.6% of the respondents rated it well (good or very good) before devolution compared to 14% after devolution. On the other hand, 69% of the respondents rated this service poorly (poor or very poor) after devolution compared to 10% before devolution. This shows inefficiency of the HR management to address the needs of the workforce despite devolution of the HCWs.

Provision of incentives for HCWs to work in the hard to reach and zones with fewer social amenities significantly worsened from 26% to 80% with devolution (P<0.001). More than three quarters (80%) of the respondents gave an adverse rating; 35% poor and 45.5% very poor, after devolution with only 6% giving a favourable rating (good or very good). Before devolution, almost half (47%) of the respondents gave a favourable rating. Control over human resource management in the health sector is a major factor in devolution that has far reaching effects on the health sector functions

The findings on this study contradicts Bosserts and Beauvais (2002) where they argued that, because a large percentage of health sector resources in developing countries goes to salaries and because personel management has a strong effect on local decision making. Centralisation of human resources management tend to significantly undermine local decision space provided thus the need for decentralization.

4.3.4 Health Financing

Table 4.4 Analysis of Health Care Financing Before and after devolution

Health Care Financing	**Period**	**V. Poor** Freq. (%)	**Poor** Freq. (%)	**Neutral** Freq. (%)	**Good** Freq. (%)	**V. Good** Freq. (%)	**Chi-statistic (*P Value)**
i. Funding sources diversified	Before	2 (2.6)	15 (19.7)	32 (42.1)	26 (34.2)	1 (1.3)	31.6
	After	21 (27.6)	25 (32.9)	23 (30.3)	7 (9.2)	0	(P<0.001)
ii. Funds mobilized from stakeholders	Before	2 (2.6)	9 (11.8)	32 (42.1)	26 (34.2)	7 (9.2)	26.8
	After	14 (18.4)	22 (29)	30 (39.5)	8 (10.5)	2 (2.6)	(P<0.001)
iii. Audit & accountability mechanisms exist	Before	4 (5.20	9 (11.7)	29 (37.7)	30 939)	5 (6.5)	24.9
	After	15 (20.3)	23 (31.1)	23 (31.1)	13 (17.6)	0	(P<0.001)
iv. There is a policy guideline on funds utilization	Before	2 (2.6)	8 (10.5)	26 (34.2)	33 (44.4)	7 (9.2)	35.0
	After	14 (18.4)	26 (34.2)	25 (32.9)	19 (11.8)	2 (2.6)	(P<0.001)
v. Health budget implemented on time	Before	3 (4.1)	16 (21.6)	24 (32.4)	22 (29.7)	9 (12.2)	27.7
	After	24 (31.6)	23 (30.3)	17 (22.4)	10 (13.20	2 (2.6)	(P<0.001)

The values in parenthesis are P Values represent differences between the distributions for the period before and after devolution of health care.

Devolution envisaged prioritization of health budget in order to broaden the health services rendered and also increase access to quality care. Broad-based health financing steers the other elements of health system strengthening.

Diversification of funding sources in the devolved system was more adversely rated compared to the centralized system. Cumulatively, close to two-thirds (60%) of the respondents gave a poor rating of the devolved system compared to 22% in the centralized system (before devolution) while 35% gave a good rating before devolution and 9% after devolution. This shows that there is failure by the county to diversify funding sources that is one of the expectations according to the constitution.

Both mobilization of funds from stakeholders and the audit/accountability systems were significantly adversely rated after devolution compared to the period before devolution (P<0.001). Similarly, the scoring on availability of guidelines on funds utilization and timely implementation of health budgets were rated better before devolution of health services and significantly worse (P<0.001) after devolution. Whereas 42% of the respondents gave a good rating before devolution

with 26% rating it poor, after devolution the adverse rating was 62% and good rating only 16%. This significantly affects the availability of health services on time therefore affecting the quality of services offered.

The findings on healthcare financing are in agreement with health action plan (2011), it notes that allocation of funds to primary care facilities has been poor despite the significant role they play as the first point of contact in the provision of healthcare services.

4.3.5 Overall assessment of devolution of health care

According to the constitution of Kenya 2010, devolution envisaged addressing the shortcomings of the centralized system of government. The specific vision for devolving health was to improve functions such as health service delivery, leadership and governance, management of human resource for health and healthcare financing and ultimately improve health access and equity. Devolution was meant to reduce technical inefficiency, bureaucracy, thus resulting in faster decision making and giving an increased opportunity for the representation of local population reflecting local needs. The aspect of local preference has been a key reform strategy adopted in the health sector decentralization.

As shown in Figure 6 only 15% of the respondents believe that devolution has improved access (1.3 strongly agreeing 14.1% agreeing). More than half (51%) opined that devolution has not improved access (29.5% disagreeing & 21.8% strongly disagreeing) while 33% thought that there has not been a change in the access before and after devolution.

Close to two-thirds (63%) disagree with the notion that devolution has improved quality of services to citizens whilst only 14% agreed that there has been notable improvement. Devolution too has not improved the other two health systems building blocks that are governance/stewardship and health financing for which more than 60% of the respondents disagreed with the notion of improvement. This shows that there is no obvious generalization that may be forthcoming about the impact of devolution on aggregate access since the impact of various factors may work in different directions

Lastly, only 10% of respondents agree that equity has improved with devolution with 70% disagreeing and 77% agreeing that devolution of health is in need of a new and more robust strategy in order to succeed as shown in Figure 6. This suggests that attainment of the goals of devolving health care is far from reach or the immediate outcomes/benefits are yet to percolate to the intended recipients.

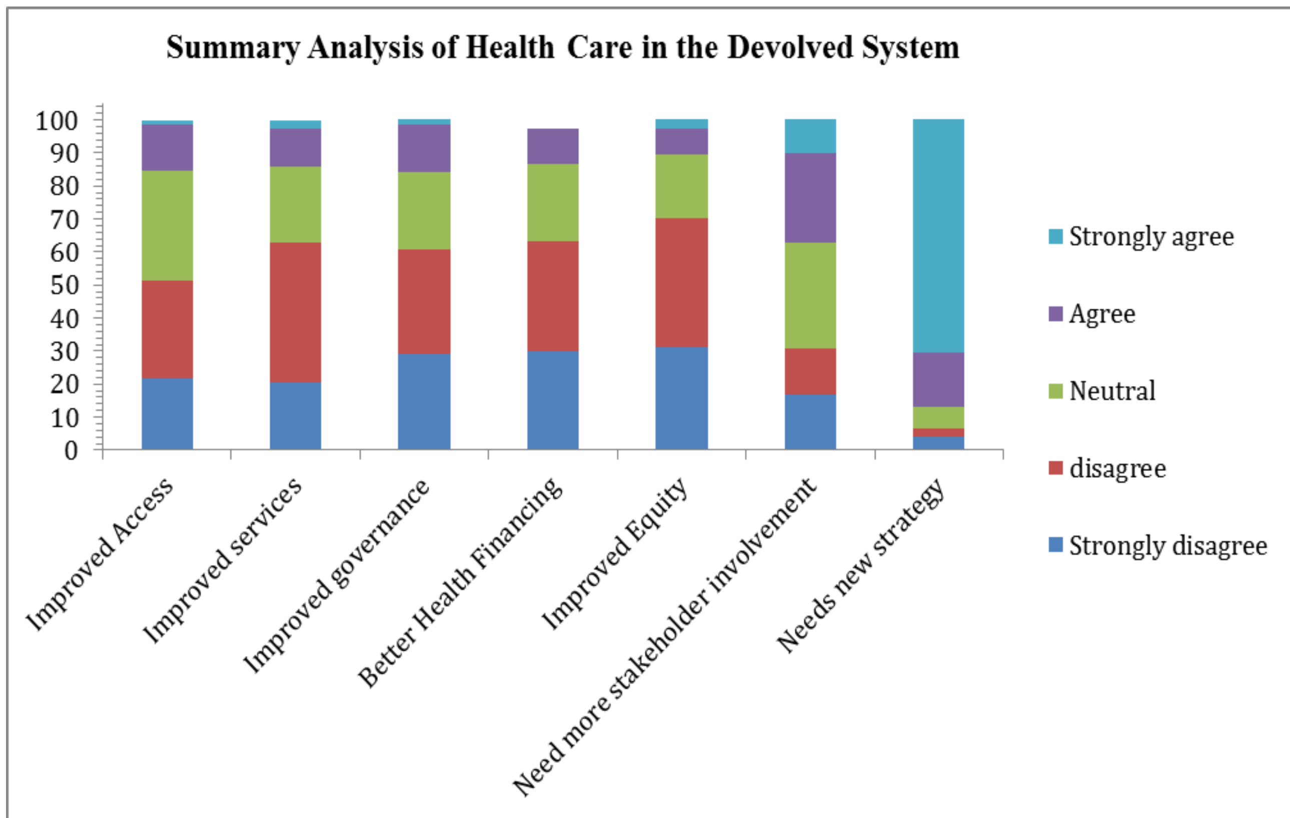

Figure 6: Summary of Views about Devolution

Only 8% of the respondents identified devolution as the best strategy to address health inequities while 4% found no difference between the devolved and centralized system of health care delivery. Though the majority (56%) of the respondents found the devolved system as detrimental, 32% of them thought devolution of health would be better if the implementation strategy was different and more effective.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATION

5.1 Introduction

This chapter seeks to integrate the literature review and the findings of the study in order to draw conclusions and give relevant recommendations to improve health system functioning in the devolved structures.

5.2 Summary of findings

The study investigated the health system under four domains namely; health service delivery, management of human resources for health, leadership/governance and health care financing. The periods before and after devolution were the two main comparators. Most of the elements in the four domains showed a statistically significant deterioration as per the rating. In particular, there was no single element in any of the four domains that was rated as better after devolution of health.

Delivery of quality health services was poorer after devolution as denoted by significantly poorer rating of the provision of health services to the marginalized communities, equipping of health facilities, supply of essential health commodities, emergency preparedness and provision of emergency services. These were some of the key health service delivery challenges that devolution was expected to address decisively. The fact that the rating of patient referral system was not different in the two periods is also a pointer that nothing much has been done to improve the referral system. There was overwhelming evidence, from the findings, to reject the first null hypothesis that devolution has had no significant effects on the delivery of health services.

Leadership and governance was the second health systems domain evaluated in this study which also showed significant deterioration. From the findings, the devolved structures appeared not to have addressed the key leadership and governance issues like quality of support supervision, defining roles for the various health management teams, infrastructural needs assessment and communication across the various levels of governance. All these functions including administration of health budgets were significantly poorer after devolution, effectively providing evidence for rejection of the second null hypothesis in favour of the alternative.

The study hypothesized that devolution would not have any significant effect on the management of human resources. However there was overwhelming evidence that this function was negatively affected by devolution. Measures that could have improved this function and possibly have a spillover effect on the other health system functions were all noted to have deteriorated or not taken at all. Majority of the interviewees opined that there were no specific measures to address staff shortage and that there were no measures to motivate staff. Staff needs assessment, incentivizing those working on the more disadvantaged areas, timely payment of salaries and assessment of work environment were rated worse after devolution. Staff intimidation was a common theme among those interviewed and is likely to have deleterious effects on the productivity hence eroding any benefits devolution of health may have.

Lastly, financing of health system was expected to improve with devolution. The findings of this study were in favour of the alternative hypothesis since all the elements assessed were significantly different after devolution. Diversification of funding sources, policy guidelines on funds utilization, audit and accountability mechanisms as well as timely appropriation of the budgets were all rated worse after devolution.

5.3 Conclusions

The constitution of Kenya 2010 provides clear guidelines as pertains to the implementation of devolution of health. The structure of the Healthcare system has changed considerably from what existed previously and various functions have been devolved to County governments. Devolution of Healthcare has the potential of addressing the various Health challenges that have faced Kenya since independence. However, for the whole process to succeed, the various actors and stakeholders will have to pull in the same direction to realize this dream

Devolution of healthcare with regard to provision, supervision and resource allocation from the central to local government is assumed to address the problem caused by a centralized system. For devolved units to provide quality health care and improve health outcomes in the communities, all efforts should address the key health systems building blocks. Delivery of quality health services anchors on a well-financed health system, timely appropriation of health budgets and a leadership system that inspires health care workers to deliver quality services. Any disconnect at any of these levels translates into poor services.

One of the recurring themes in the study was a feeling of staff demotivation and intimidation from the political and health system leadership. A demotivated work force that does not have a shared vision with the county health ministry cannot possibly deliver quality services. Gaps exist in the planning, implementation, monitoring, and evaluation of health care functions, which are pivotal roles of the health system. In the same vein, and as observed by Mangheni and Nkonya, (2011), a strategic plan whose conceptualization and development is not perceived as inclusive cannot be owned and as a result cannot be implemented for the satisfaction of the communities. Availability of essential health commodities, as a basic function of the health care system, was not addressed by the devolved health functions. The results of this study did not show any improvements or concerted efforts to improve these health services.

5.4 Recommendations

Devolution could improve health care through multiple and varied mechanisms all of which should increase the financial resources and human capital for delivery of quality health care. In addition, they should address efficient and effective use of health resources. The county health systems should explore the determinants of poor quality services with an aim of remedying the poorly performing functions. A functional referral system, adequately equipped and upgraded health facilities providing wider range of services are some of the interventions the devolved system could address in order to bring services closer to the people as envisioned in the constitution of Kenya. A county health management system should leverage on the private-public partnerships through health stakeholders' forums to increase the resources for health. Systematic health needs assessment and articulate plans to address the emerging challenges should be institutionalized within a framework of health communication.

5.5 Areas for Further Research

The study was only conducted in Nakuru County, which was conveniently selected and therefore findings may not be generalizable to the 47 counties. A similar, multi-county study would be the best to identify the progress made in the devolved health care as well as identifying the challenges facing devolution of health.

This research was conducted, taking views of the delivery side of the health care system. There is need for a similar study to cover the demand side.

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APPENDICES:

Appendix 1: The Available Staff Cadres in the Country

Sno	Cadres	Total numbers	Cadres per 10,000 population	% male	% female
1	Medical officers	2239	0.54	69.9%	30.1%
2	RCO	4723	1.13	64.7%	35.3%
3	BSC Nursing	772	0.19	34.7%	65.3%
4	KRCHN	14214	3.41	27.9%	72.1%
5	KECHN	9201	2.21	25.9%	74.1%
6	Occupational Therapist	310	0.07	70.0%	30.0%
7	Dentist	186	0.04	62.4%	37.6%
8	Dental Technologist	180	0.04	60.0%	40.0%
9	Pharmacists	552	0.13	60.3%	39.7%
10	Pharmaceutical Technologist	1144	0.27	53.3%	46.7%
11	Physiotherapist	477	0.11	66.9%	33.1%
12	Orthopaedic technologist	144	0.03	67.4%	32.6%
13	Medical Social worker	291	0.07	34.0%	66.0%
14	Plaster technicians	206	0.05	41.3%	58.7%
15	Laboratory Technologists	2909	0.70	58.7%	41.3%
16	Laboratory Technician	1515	0.36	47.2%	52.8%
17	Health Record & Information Officers	497	0.12	53.7%	46.3%
18	Health Record & Information Technicians	347	0.08	42.7%	57.3%
19	Nutritionists	496	0.12	27.4%	72.6%
20	Public health officer	1232	0.30	70.8%	29.2%
21	Public health technician	737	0.18	73.1%	26.9%
22	Health Administrative Officer	413	0.10	68.3%	31.7%
23	Medical Engineering	417	0.10	82.5%	17.5%
24	ICT Officer	207	0.05	57.5%	42.5%
25	Procurement Officer	239	0.06	57.7%	42.3%
26	Accountant	583	0.14	63.1%	36.9%
27	Drivers	845	0.20	94.2%	5.8%
28	Clerk/cashier	2492	0.60	36.8%	63.2%
29	Cooks	452	0.11	37.2%	62.8%
30	Store Man	131	0.03	61.1%	38.9%
31	Support Staff (Casuals)	9682	2.32	44.2%	55.8%
32	Trained CHW	395	0.09	42.8%	57.2%
33	Radiographer	347	0.08	75.5%	24.5%
34	Community Oral H/ Officer	150	0.04	48.0%	52.0%

Sno	Cadres	Total numbers	Cadres per 10,000 population	% male	% female
35	Biochemist	10	0.00	40.0%	60.0%
36	Economist	6	0.00	100.0%	0.0%
37	Social Worker	28	0.01	32.1%	67.9%
38	Other	8306	1.99	49.7%	50.3%
	Grand Total	**67075**	16.08	44.3%	55.7%

Source: Ministries of medical services and public health and sanitation, (2013).

Appendix 2. Service Delivery Points in Nakuru County as at January 2014

	District	Hospitals	Health Centers	Dispensaries	Clinics	Totals HF	Active CUS	Non Operational
1	Molo	2	4	9	5	**20**	**3**	**5**
2	Nakuru North	1	8	3	18	**30**	**15**	**0**
3	Njoro	0	4	14	14	**32**	**10**	**6**
4	Kuresoi	1	5	22	10	**38**	**6**	**3**
5	GILGIL	3	2	10	17	**32**	**15**	**4**
6	Nakuru Central	7	12	26	46	**91**	**24**	**4**
7	Rongai	0	5	21	3	**29**	**11**	**5**
8	Subukia	0	4	6	5	**15**	**12**	**2**
10	Naivasha	4	10	11	23	**48**	**15**	**8**
	Totals	18	54	122	141	**335**	**111**	**37**

Source: County Office Register, 2014

Appendix 3: Doctors and Nurses available per Sub County.

SNO	Sub-County	Doctors	Clinical Officer	Nurses	**Total**
1	Nakuru Central	110	72	497	679
2	Rongai	0	9	85	94
3	Molo	15	20	86	121
4	Njoro	1	10	54	65
5	Kuresoi	3	6	53	62
6	Subukia	0	5	39	44
7	Nakuru North	5	63	42	110
8	Naivasha	54	22	145	221
9	Gilgil	10	14	114	138
	Total	197	221	1015	1534

Source: County Office Register 2014

Appendix 4: Health Strike Notice

DAILY NATION
Thursday December 12, 2013

National News | 11

DISPUTE | Minister says demands by striking staff are unconstitutional and cannot be met

Doctors strike continues after talks fail

Unions disown deal announced yesterday and governors start hiring health workers

BY NATION TEAM
newsdesk@ke.nationmedia.com

The stand-off between the government and health workers over devolution continued yesterday, paralysing services in public hospitals.

The two players dug in, with Health Cabinet Secretary James Macharia terming demands by doctors and nurses as unconstitutional while unions insist that their strike will continue.

The unions want the devolution of health staff and payroll to counties stopped. But yesterday, Mr Macharia said stopping devolution required a referendum, and that the ministry had no role to play.

He said the requirement that health functions that include staff and resources should be devolved to the counties was constitutional and nothing could be done about it.

"What the doctors are demanding is unconstitutional and is beyond the powers of the ministry," he said.

On Tuesday evening, the two groups met and released a statement that stipulated that devolvement of health functions be postponed till February.

Bills to anchor devolution of health services would be prepared by then. But the statement was not signed by union leaders.

Mr Macharia expressed his frustrations with the unions saying he sacrificed several hours in meetings with unions, only for them to turn around and declare a strike.

The timing of the strike, just as Kenyans prepared to celebrate 50 years of independence, was also suspect, said the minister during an interview with the *Nation* at his office in Nairobi.

The minister said the unions wanted two things, stoppage of devolution of health services to counties and the formation of a health service commission.

Both, he added, were outside the mandate of the ministry.

But in an earlier interview, Kenya Medical Practitioners and Dentists Union secretary-general Sultani Matendechero accused governors and the ministry of refusing to give in to their demands to anchor the devolution of health services in law.

The minister warned health workers that they may be sacked by the county government if unions do not call off the strike.

"We had asked the counties to freeze fresh recruitment of health workers until the impasse with the unions was resolved. But now that the health workers have gone on strike, the counties will continue hiring," Mr Macharia warned.

Hiring of nurses

In counties, governors vowed to hire temporary staff to avert a crisis in hospitals.

Mombasa governor Hassan Joho said that they are recruiting 100 nurses, 24 clinical officers and seven doctors at a cost of Sh1,000 per patient per day.

The group shall consist of retired medical officers and the unemployed. They will be hired by the end of the day, he said.

Interim county chief officer Esther Gitambo reiterated that they were forced to discharge some patients prematurely due to the strike.

In Bomet, governor Isaac Ruto directed doctors and nurses to vacate hospital houses and hand them over to the health management committee.

"Health workers not willing to work with us should prepare to go back to the national government for either re-deployment or retrenchment whichever may apply," he said.

In Uasin Gishu, governor Jackson Mandago stormed the county district hospital and ordered the striking staff to resume work or be sacked by his government.

Mr Mandago told the staff who had camped at the Uasin Gishu district hospital to vacate the government premises if they were not ready to go back to work.

But Kenya National Union of Nurses Uasin Gishu county branch secretary John Bii condemned the county chief's remarks.

"Our governor has no etiquette. He has treated nurses and medical officers in a humiliating way. We refuse to be harassed and to work under such barbaric leadership," Mr Bii stressed.

Patients admitted in most public health facilities in Western Kenya were yesterday discharged to seek treatment elsewhere as the strike by doctors and nurses continued.

Services were paralysed in Nyamira, Kisumu, Migori, Homa Bay, Vihiga, Kisii, Kakamega and Bomet counties.

Doctors and nurses also boycotted work in virtually all health facilities in Homa Bay county.

Most of the rural health facilities, especially dispensaries and health centres were closed.

And at Jaramogi Oginga Odinga Teaching and Referral hospital in Kisumu, only the finance unit was open as families paid bills for their relatives.

47
The number of counties in the country

AFFECTED

Others bearing brunt of boycott

Students suffer: Students on clinical trials from Nakuru's Medical Training Centre, Egerton University and an array of private medical training centres stayed away from Nakuru Level 5 Hospital and its five satellite district hospitals as their supervisors were nowhere to be seen.

Congestion: The Consolata Mission Hospital in Mathari has been forced to create more room for the frail patients who were transferred from Nyeri.

KEVIN ODIT | NATION

Ms Esther Kavyele weeps as she waits for doctors at the Coast General Hospital yesterday. Her daughter has not been treated for the last two days.

HEALTH SERVICES | Private hospitals overwhelmed by an influx of patients

Hospitals paralysed as strike enters sixth day

Health workers say they will not be intimidated by the government decision to hire 'unlicensed' people

BY NATION TEAM
newsdesk@ke.nationmedia.com

Services in public hospitals countrywide continued to be paralysed as the health workers' strike entered its sixth day.

Yesterday, the chairman of the Kenya National Dentists Association, Dr Sultan Matendechero, maintained the strike was on, adding that the government had not engaged the workers.

He asserted that the health workers will not be intimidated by the government move to hire unlicensed people.

"The people the government is hiring have just completed school and have not even undergone tactical operations under supervision. The government is simply letting unqualified people experiment with the lives of Kenyans," he said

He called on Kenyans not to blame health workers, adding that it was the government that had failed to play its part.

"Why is it so hard for the national government to state that it will retain personnel emolument until we have structures and a law in place to handle the health functions at counties?" he asked.

The Kenya Health Professional Association, secretary-general, Moses Lore, also blamed the government, "Nurses are already working in counties but we cannot just move into the new dispensation without clear terms, a thing the government has failed to avail," he said.

At Jaramogi Oginga Odinga Teaching and Referral hospital in Kisumu town, 15 accident victims have not had their festering wounds cleaned for several days.

And Kakamega County has advertised various positions in the health sector.

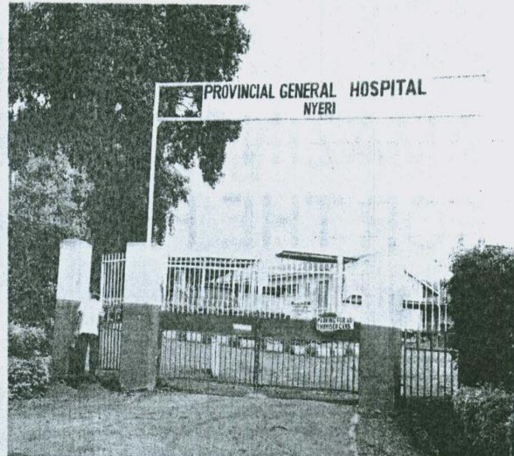
In Kisii, only security personnel and hospital managers were in hospitals.

At the Siaya County Hospital, doors remained closed as the patients were kept away from the facility.

In Nyeri County, private hospitals are overwhelmed by an influx of patients as public hospital gates remain closed.

The Consolata Mission Hospital in Mathari has been forced to create more room for patients who have flocked the hospital seeking treatment. Patients at the maternity ward are sharing beds.

> "Why is it so hard for the national government to retain salaries until we have structures and a law to handle the health functions at counties?"
>
> **Chairman of Kenya National Dentists Association Dr Sultan Matendechero**



JOSEPH KANYI | NATION

There were no activities at the Nyeri Provincial General Hospital as health workers continued with their strike yesterday.

In Tharaka Nithi, Governor Samuel Ragwa has threatened to sack casual workers who have joined the strike.

Services at the Meru Level Hospital have ground to a halt as doctors and nurses continue to protest against the devolution of health services. Patients seeking treatment at the hospital are being turned away as the strike continues.

In Kirinyaga, governor Joseph Ndathi talked of plans to employ 134 workers.

In Narok County, governor Samuel Ole Tunai, threatened to advertise heath services positions left vacant by striking medics if they will not resume duty this week.

In Makueni, health workers did not join the nationwide strike following a negotiation with the county to maintain salaries at the national government level.

In Lugari, MP Ayub Savula, supported the health workers strike, saying it was impossible to devolve medical services without procedures guiding it.

In Baringo County, members of the County Assembly said the strike had caused untold suffering to the sick. Speaker William Kamket urged striking medics to report back to duty.

Appendix 5: Population Projection By Sub county

Sub-County	2009 Census			2012 Projections			2015 Projections			2017 Projections		
	Male	**Female**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**
Nakuru central	156565	152859	309424	171567	167505	339072	188006	183555	371561	199831	195101	394932
Rongai	71914	70213	142127	78805	76941	155745	86355	84313	170668	91787	89616	181403
Molo	62254	62184	124438	68219	68142	136361	74756	74671	149427	79458	79368	158826
Njoro	88364	89816	178180	96831	98422	195253	106109	1077852	213961	112783	114636	227419
Kuresoi	121336	118149	239485	132962	129470	262432	145702	141875	287577	154867	150799	305665
Subukia	39160	40713	79873	42912	44614	87526	47024	48889	95913	49982	51964	101945
Nakuru North	74907	78648	153555	82084	86184	168268	89949	94442	184391	95607	100382	195989
Naivasha	123725	122331	246056	135580	134052	269632	148571	146897	295468	157916	156136	314052
GilGil	66357	63830	130187	72715	69946	142661	79682	76648	156330	84694	81469	166163
Total	**804582**	**798743**	**1603325**	**881674**	**875276**	**1756950**	**966154**	**959142**	**1925296**	**1026924**	**1019471**	**2046395**

Source: Kenya National Bureau of Statistics, 2013

Appendix 6: Questionnaire

Dear Respondent,

I am a student taking a Masters degree in Business administration (MBA) at Kabarak University, and I am currently undertaking a research study on devolution of health. In order for me to complete the study, I need your help in completing the questionnaire below which should take you not more than 15 minutes to complete. Please be assured that all answers provided in this questionnaire will be treated with utmost confidentiality and shall only be used for the purpose of completing my dissertation.

PART A

Respondent Information

1. Gender

   Female ☐ Male ☐

2. Professional Background (Tick only one)

   Medical Doctor ☐ Nurse ☐ Clinical officer Pharmacist ☐

   Others (Specify) ……………………………………

3. Highest educational level (Tick only one)

   Certificate ☐ Diploma ☐ Degree ☐ Masters degree ☐ PHD ☐

4. What position do you hold in the county/health facility?

   Member County Health Management Team ☐

   Member Sub County Health Team ☐

   Facility Health Manager ☐

   Departmental head ☐

   Service provider ☐

SECTION B: SPECIFIC QUESTIONS

SERVICE DELIVERY

5. In your opinion, what are the main challenges facing delivery of quality health services under the devolved system

   i. ……………………………………………………………….

   ii. ……………………………………………………………….

   iii. ……………………………………………………………….

6. Are you aware of any plan by the County to address the challenges mentioned above?

   Yes ☐ No ☐

Please answer yes/no in the following section

	Yes	No
7. Do you think devolution of health has created enough resources for delivery of essential health services?		
8. Within the last 12 months has there been:		
i. Establishment of new facilities in the County?		
ii. Upgrading the capacity of existing facilities to provide more health services?		

9. **a).** In view of the devolved health care system please rate the performance of health service delivery under the stated domains. Please choose your preferred response by ticking **only one box** per question. **Key** 1=Very poor 2=Poor 3=Fair 4=Good 5=Very good

		1	2	3	4	5
i.	Patient referral system					
ii.	Provision of health services to marginalized and vulnerable populations					
iii.	Equipping of health facilities					
iv.	Supply and access to essential drugs in the health facilities					

v.	Provision of quality emergency health services at the point of need					
vi.	Emergency preparedness and response mechanism across the county health facilities.					
vii.	Medical evacuation and emergency services					
viii.	Provision of outreach services to the underserved areas					
ix.	Maintenance and fueling of vehicles to facilitate service delivery.					

9. b). Please rate the performance of health service delivery before devolution, under the stated domains. Please choose your preferred response by ticking **only one box** per question. **Key** 1=Very poor 2=Poor 3=Fair 4=Good 5=Very good

		1	2	3	4	5
i.	Patient referral system					
ii.	Provision of health services to marginalized and vulnerable populations					
iii.	Equipping of health facilities					
iv.	Supply and access to essential drugs in the health facilities					
v.	Provision of quality emergency health services at the point of need					
vi.	Emergency preparedness and response mechanism across the county health facilities.					
vii.	Medical evacuation and emergency services					
viii.	Provision of outreach services to the underserved areas					
ix.	Maintenance and fueling of vehicles to facilitate service delivery.					

LEADERSHIP AND GOVERNANCE

Please respond to the following questions

10. Do you know of existence of County health strategic plan? Yes ☐ No ☐

(If no, please jump to question 12)

i. If yes, what period does it cover? From ………………….. To……………………..

ii. In your opinion, is the plan being implemented? Yes ☐ No ☐ I don't know ☐

iii. Does the health strategic plan include monitoring and evaluation plan?

Yes ☐ No ☐ I don't know ☐

11. Which of the following groups of people/institutions were involved in the development of the county health strategic plan? (Circle your response; you can **choose more than response**)

i. Staff in health facilities
ii. Community Representatives
iii. Development partners .e.g. Non-Governmental Organizations
iv. Other government departments in the county
v. The strategic plan was developed without consultation of stakeholders

12. a) Please rate the following statements as pertains to healthcare leadership and governance before devolution. Please choose **only one** response per question by ticking in the boxes. **Key** 1=Very poor 2=Poor 3=Fair 4=Good 5=Very good

No		**1**	**2**	**3**	**4**	**5**
i.	Leadership and governance in the health care system					
ii.	Health leadership's collaboration with stakeholders					
iii.	Channeling of communication between levels of service delivery					
iv.	Quality of Support supervision from the following hierarchies of leadership/management					
a.	Provincial Health Management Team					
b.	District Health Management Team					

v.	Definition of roles and responsibilities of the Health management teams					
vi.	Performance of health management teams in the following areas:					
a.	Administration of health budgets					
b.	Personnel e.g. posting, hiring, transfer					
c.	Purchase of drugs and medical equipment					
d.	Defining needs in infrastructural improvements – building and renovation					

12. b). Please rate the following statements as pertains health care system after devolution. Please choose **only one** response per question by ticking in the boxes. **Key** 1=Very poor 2=Poor 3=Fair 4=Good 5=Very good

No		**1**	**2**	**3**	**4**	**5**
i.	Leadership and governance in the health care system					
ii.	Health leadership's collaboration with stakeholders					
iii.	Channeling of communication between levels of service delivery					
iv.	Quality of Support supervision from the following hierarchies of leadership/management					
a.	County Health Management Team					
b.	Sub-County Health Management Team					
v.	Definition of roles and responsibilities of the Health management teams					
vi.	Performance of health management teams in the following areas:					
a.	Administration of health budgets					

b.	Personnel e.g. posting, hiring, transfer					
c.	Purchase of drugs and medical equipment					
d.	Defining needs in infrastructural improvements – building and renovation					

HUMAN RESOURCE FOR HEALTH

13.a). In view of health service delivery under the central government (before devolution) please rate the management of human resources under the listed items. Please indicate your response to the statements by ticking **only one box** per question. **Key** 1=Very poor 2=Poor 3=Fair 4=Good 5=Very good

No		1	2	3	4	5
i.	Specific measures to address shortage of health staff					
ii.	Staff motivation through continuous professional development					
iii.	Staff recruitment and merit-based promotions					
iv.	Identification of staffing needs, hiring and posting of health personnel					
v.	Dissemination of health policy guidelines					
vi.	Defining structures for grading and appropriate remuneration of health workers					
vii.	Management of payroll and timely payment of salaries					
viii.	Creating incentives for staff working in hard to reach areas					
ix.	Provision of non-financial incentives to improve health workers motivation					
x.	Providing a work environment free of intimidation and interference					

13.b). In view of health service delivery under the devolved system (after devolution) please rate the management of human resources under the listed items. Please indicate your response to the

statements by ticking **only one box** per question. **Key** 1=Very poor 2=Poor 3=Fair 4=Good 5=Very good

No		1	2	3	4	5
i.	Specific measures to address shortage of health staff					
ii.	Staff motivation through continuous professional development					
iii.	Staff recruitment and merit-based promotions					
iv.	Identification of staffing needs, hiring and posting of health personnel					
v.	Dissemination of health policy guidelines					
vi.	Defining structures for grading and appropriate remuneration of health workers					
vii.	Management of payroll and timely payment of salaries					
viii.	Creating incentives for staff working in hard to reach areas					
ix.	Provision of non-financial incentives to improve health workers motivation					
x.	Providing a work environment free of intimidation and interference					

HEALTH FINANCING

14. What are the main sources of funds for the county ministry of health?

a. User fees collected at the facility
b. Funding from the central government
c. Reimbursements from health insurance
d. Others (Specify) …………………………………………………………………

15. Is there a system for tracking and auditing budget expenditures at the county level?

Yes ☐ No ☐ I don’t know ☐

16. In the funding arrangements between the county and the stakeholders, are any contracting mechanisms in place? Yes ☐ No ☐

17. a.) In view of health service delivery before devolution, please rate the following aspects of health care financing. Please indicate your response to the statements by ticking **only one box** per question. **Key** 1=Very poor 2=Poor 3=Fair 4=Good 5=Very good

No		**1**	**2**	**3**	**4**	**5**
i.	Diversity in means of generating of financial resources to meet health needs					
ii.	Mobilization of funds from stakeholders e.g. donor funds, Public-Private partnerships					
iii.	Mechanisms for auditing and accountability for health expenditure					
iv.	Policies guiding receiving and implementation of funds from national government and other stakeholders.					
v.	Timely implementation of the health budget					

17.b.) In view of health service delivery after devolution, please rate the following aspects of health care financing. Please indicate your response to the statements by ticking **only one box** per question. **Key** 1=Very poor 2=Poor 3=Fair 4=Good 5=Very good

No		**1**	**2**	**3**	**4**	**5**
i.	Diversity in means of Generating of financial resources to meet health needs					
ii.	Mobilization of funds from stakeholders e.g. donor funds, Public-Private partnerships					
iii.	Mechanisms for auditing and accountability for health expenditure					
iv.	Policies guiding receiving and implementation of funds from national government and other stakeholders.					
v.	Timely implementation of the health budget					

18. In a scale of 1 to 5 please rate the extent to which you agree with the following statements. Mark with an "X" in the appropriate box

No		Poor (1)	Below par (2)	Average (3)	Good (4)	Exemplary (5)
i.	How would you rate the performance of health sector since devolution took place					
		Strongly disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
i.	Implementation of devolution has led to increased access to care					
ii.	Implementation of devolution of health has improved service delivery					
iii.	Implementation of devolution health has led to improved leadership and governance					
iv.	Implementation of devolution health has led to an improvement of health care financing					
v.	Implementation of devolution has led to equitable distribution of resources .e.g. health workforce, finances.					
vi.	Stakeholders have a role to play in the implementation of devolved health					
vii.	A lot still needs to be done to make devolution effective					

19. Please choose the **best** response that suits your opinion about devolved health system (Choose **only one** response)

a. Devolution of health is the right thing to do if one is to address health inequities
b. Health should be managed through the centralized system as it were in the previous constitution
c. Devolution of health is right but the current implementation strategy is defective
d. There is no difference in health care delivery under the devolved or the centralized system