

## Devolved Healthcare Finance and Service Delivery in County Government Hospitals in Kenya

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### Abstract:

This study sought to establish the influence of devolved healthcare financing on service delivery in county government hospitals in Kenya. Kenya adopted a system of devolution in 2010 and devolved some of the major national government functions, such as healthcare, to the county governments. In healthcare devolution, the national government retained the functions of policy development, technical support, capacity building, regulation, and management of national referral healthcare facilities, while the county governments heavily focused on provision of primary healthcare services. This technically meant that the national government was the policy developer while the county governments were policy implementers. The Constitution of Kenya defines the relationship between these two governments as one that should be interdependent and consultative, but is this the case on the ground? Debate concerning the influence of healthcare devolution has elicited various reactions from different scholars; however, very few empirical studies have examined the relationship between healthcare devolution and service delivery. Most of these studies have also been done in countries outside the continent of Africa, therefore making generalization of these studies difficult in the Kenyan context. This study therefore sought to contribute to the growing body of knowledge by determining the influence of devolved healthcare finance on service delivery in Kenya. It predominantly employed the positivism research philosophy and used qualitative research design. The target population of the study was 137 county government public hospitals from which a sample size of 385 respondents was selected. Data was collected using a questionnaire and an interview guide. Data was analyzed using SPSS version 27, using both descriptive statistics and statistical modeling. Data was presented in the form of figures, charts, and tables. The findings show that devolved healthcare financing positively and significantly influenced service delivery. This influence was further strengthened by the moderating variable, intergovernmental leadership. The study concludes that devolved healthcare financing influences service delivery. The study recommends that for service delivery to improve, there is need for reform, as far as devolved healthcare financing is concerned, as well as the need to enhance intergovernmental leadership. The study recommends the need for increased healthcare funding, disbursing finances from the national government to the county governments in a timely manner, enhanced financial accountability and making the budgeting process more participatory to improve service delivery.

**Key Words:** Devolved Healthcare Finance, Service Delivery, County Government, Public Hospitals

## Background of the Study:

The study sought to find out the influence of devolved healthcare finance on service delivery in county government public hospitals in Kenya. The healthcare function in Kenya was devolved from the national government to the county governments after the promulgation of the Constitution of Kenya in 2010. While the national government retained the healthcare functions of development of health policies, capacity building, regulation, technical assistance to counties and management of national referral health facilities, the county governments became the implementers of national government policies and mainly promote primary healthcare (Ghai & Ghai, 2021). Devolution is a form of decentralization. Decentralization comprises political decentralization, administrative decentralization, fiscal decentralization, and market decentralization. Administrative decentralization, under which devolution falls, consists of three major forms: deconcentration, delegation and devolution. Devolution, compared to deconcentration and delegation, is the strongest form of administrative decentralization due to the fact that not only does the central government transfer functions to the local governments; it also transfers to them the authority to make decisions (Li & Peng, 2023).

It is, however, critical to note that during devolution, while the central government transfers functions and authority to local governments, the devolved powers of the sub-national authority are ultimately still vested in the central government, therefore the state remains legally recognized as a unitary state. This therefore means that the legislation that created the devolved governments can be repealed or amended by the central government just in the same way as any other statute (Hofmeister & Tayao, 2016). This is unlike in the case of federalism, for example in the USA, where the powers given to the federal state as well as the state governments are embedded in the Constitution, giving the constituent units in a federal system an unalterable state (Sosa, 2017).

The best gauge of any government's good governance performance is public service delivery (Wagana, 2017). However, there are global events that can devastate even the most excellent public service delivery systems. For example, the Corona Virus Disease 2019 (COVID-19) pandemic that disrupted the entire world's ability to deliver services to its citizens. Access to public services is a key determinant of a country's human development and productivity (Msafiri, 2018). The indices that can be used to measure service delivery include: improved and affordable health services, low rates of inflation, provision of clean water and sanitation services, improved education, high quality infrastructure and motorable roads to rural areas for purposes of transporting raw material and agricultural produce. These services are a determinant of a population's quality of life (which can be measured by the Human Development Index, HDI) and access to them is key to poverty reduction and enhanced development (Wagana, 2017).

In Africa, service delivery has faced crisis due to several challenges that include avoidable wars, military rule, kleptocracy, neo-colonialists and other disasters (Olatunji, 2017). The Mo Ibrahim Foundation convened young African professionals and emerging leaders to gather their perspectives on public service in Africa. The participants expressed their fundamental standard of public service expectation as: quality, inclusive and equitable access to health, education, decentralized services, security, jobs, and justice. These services, they said, need to be delivered in a professional, customer-focused, accountable, transparent manner while embracing technology and the national governments must take the lead in this process, as the main actors (Mo Ibrahim Foundation, 2018).

The World Health Organization defined the six key elements of a well-functioning health system as: healthcare financing (a healthcare system that raises adequate funds to ensure that patients are protected from financial destitution when they use these services), leadership and governance (leaders who provide strategic policy frameworks,

effective oversight, regulation and networking); Human Resources for Health (who are efficient, fair and responsive to patients, given the availability of resources and conducive environment); health information systems (which ensure the production, evaluation and distribution of timely and reliable information concerning health determinants and status as well as the performance of the health system); essential medical products, technologies and vaccines (equitable access to those that are of high quality, effectiveness, cost-effective and safety); and finally, service delivery (a healthcare system that offers healthcare services which provide personal and non-personal, effective, safe and quality healthcare interventions to patients, at an affordable price and convenient location and time). A well-functioning healthcare system is one that responds to its members' needs through: improved health status, protection against financial consequences of ill-health, defense against health threats, equitable access of healthcare services and member participation in decision-making concerning both their health as well as the healthcare system (Manyazewa, 2017)

The significance of healthcare worldwide can be attested to by the conception of the eight United Nations Millennium Development Goals (MDGs) in September 2000 and signed by all member countries with a focus of achievement by end of 2015. For purposes of continuity after 2015, the MDGs later gave way to the origin of the seventeen United Nations Sustainable Development Goals (SDGs), beginning 2016. Both the MDGs and the SDGs have included aspects of healthcare as part of their goals (Kumar, Kumar & Vivekadhish, 2016).

### **Statement of the Problem:**

Healthcare in Kenya is considered fundamental for economic development. This can be attested to by its inclusion in the Kenya Vision 2030 as a key pillar of development (Kenya Vision 2030, 2020). Aligned to this, the Ministry of Health has also developed the Kenya Health Policy 2014-2030 and further, it has developed healthcare strategies through its periodic four-year Kenya Health

Sector Strategic and Investment Plan (KHSSIP). Currently under implementation, is the 2023-2027 strategic plan (Ministry of Health Kenya, 2022).

The healthcare function was devolved from the national government to the counties with the promulgation of the new constitution in 2010. The primary reasoning behind the devolution of healthcare was for purposes of allowing the local governments to draft health interventions and models that best suited their distinct county needs, allowing them to make speedy and independent decisions and finally, to allow the citizens to participate in decision-making at the grassroots level (Kimathi, 2017).

According to the World Health Organization, service delivery is one of the critical components of a well-functioning healthcare system. In Kenya, however, service delivery in the healthcare sector has faced several challenges. There have been cases of serious medical malpractice, for example, where a patient mistakenly underwent surgery while the ailing patient with a brain blood clot was discharged with medication; theft of newborn babies from the hospitals as their mothers recuperated after delivery; sexual assault of new mothers (Omboki, 2018) and the death of patients due to retained surgical items inside patients' bodies who have undergone surgery (Okech, 2018).

Cases of medical workers threatening or going on strike due to poor pay and working conditions have also been on the rise. In 2017, doctors downed their tools for 100 days, as they clamored for higher salaries, increased doctor numbers in public hospitals and improvement of dilapidated public health facilities; this strike led to unprecedented loss of lives. The COVID-19 pandemic also exposed the country's gaps in critical health services, where several counties have been found to have no intensive care unit (ICU) or medical ventilators, which are necessary for the survival of COVID-19 patients and other patients as well (Adudans, 2020).

Corruption in the healthcare sector in Kenya has also been rampant. In 2018, The Ministry of Health was impacted by the loss of 10.9 billion

Kenya shillings through: unverifiable expenditure, criminal cartels, and undelivered supplies (Gachuri, 2019). Part of Chinese billionaire Jack Ma's COVID-19 donation of protective gear and testing kits was also stolen while in transit (Wasuna & Oketch, 2020) and there was also theft of millions of dollars of financial aid for COVID-19 that had been received therefore leading to financial and medical material shortages in hospitals across the country (Wasike, 2020).

The healthcare sector is an extremely sensitive sector since high disease burden and unnecessary deaths have both microeconomic and macroeconomic impact. At the microeconomic level, there is reduction of organizational productivity and profits and by extension, the loss of household income due to reduced working hours or job loss, therefore increased poverty levels and loss of family breadwinners. At the macroeconomic level on the other hand, there is the loss of taxpayers due to death or job loss; aggregate disease impact on the country's Gross Domestic Product (GDP) and reduced future growth prospects (Neofytidou & Fountas, 2020).

In 2014, the WHO placed Kenya's rate of burden of disease at 24% while Frings *et al.* (2018) noted high rates of years of life lost (YLL) due to premature death in several counties in the country. It is also critical to note that the top five diseases that cause death in Kenya are all preventable and have been the same from 2007 to 2017; and include: HIV/ AIDS, lower respiratory infection, diarrhoea, neonatal disorders and Tuberculosis (IHME, 2017). It is against this background that this study sought to establish the influence of devolved healthcare financing on service delivery in county government public hospitals in Kenya.

#### **Research Objectives:**

1. To examine the influence of devolved healthcare financing on service delivery in county government hospitals in Kenya
2. To establish the moderating influence of intergovernmental leadership on the relationship between devolved healthcare financing and service delivery in county government hospitals in Kenya

#### **Research Hypothesis:**

**H<sub>01</sub>:** Devolved healthcare financing does not significantly influence service delivery in county government hospitals in Kenya.

**H<sub>02</sub>:** There is no significant moderating influence of intergovernmental leadership on the relationship between devolved healthcare financing and service delivery in county government hospitals in Kenya.

#### **Theoretical Framework:**

##### **The Theory of Scarcity:**

The proponent of the theory of scarcity was Lionel Robbins, in the 1930s, in his definition of Economics as a science that studies human behaviour as a relationship between endless needs and scarce resources which have alternative uses. The theory of scarcity is a basic economic assumption of an existing gap since demand of human needs is greater than the resources available to meet these needs. Money, which is considered a raw material, is one of the scarce commodities in an economy, therefore bringing about competition for this finite good; and in turn, there must be trade-offs in the allocation and spending of money in the different sectors of an economy. In economics, money scarcity refers to the low level of liquidity to fund all the possible trades and programs that the government would like to finance (Bayad & Anwar, 2021).

Several authors (Dawson (2001); Porter (1965); Zaman (2018)) have critiqued the scarcity theory basing their argument on the fact that the basis of most economics is a false theory of scarcity, which completely ignores the other extreme: the theory of abundance. They argue that: first, scarcity does not just come into existence; it is caused by a few wealthy people who hold back resources to control them. Secondly, economics fails to differentiate between needs (which are finite and technically satiable) and wants (which technically consists of all the desires an individual may have, but which are not all satiable) (Daoud, 2018).

Thirdly, several industries have disputed this theory, for example the restaurant business, which open restaurants next to their competitors (as

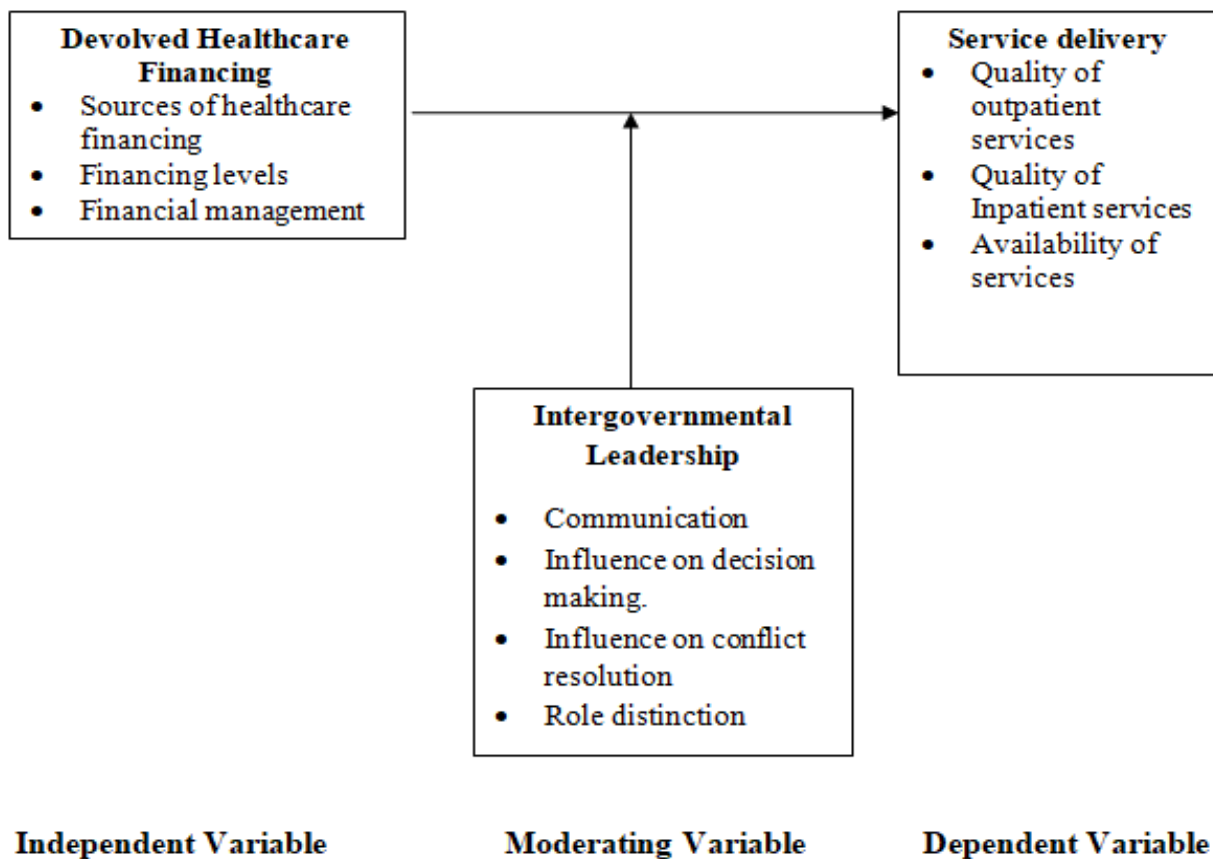
opposed to away from them) to maximize on the number of people looking for food (abundance mentality); hence the advent of ‘food courts’ and ‘restaurant rows’. The theory supports the variable devolved healthcare financing, since: while healthcare is considered a critical need for the citizens of a country, the available financial resources are usually limited; with many other important, competing needs (Daoud, 2018).

**Conceptual Framework:**

Adom, Hussein, and Adu-Agyem, (2018) define conceptual framework as a group of concepts that

are broadly defined and systematically organized to provide a focus, a rationale, and a tool for the integration and interpretation of information. The purpose of a conceptual framework is to help the reader to quickly see the proposed relationships between the independent variables, the moderating variable, and the dependent variable. It is a diagrammatic representation of the relationships that exists between the variables under study.

The conceptual framework is shown below:



**Figure 1: Conceptual Framework**

**Devolved Healthcare Financing:**

Healthcare financing, also known as health financing, is the function that is concerned with the mobilization, accumulation, distribution and accountability of financial resources necessary to cover the health needs of a population. The main purposes of healthcare financing include availing of funds, attracting the best providers with adequate financial incentives as well as ensuring that all individuals have access to effective public and private healthcare systems (Kairu, *et al.*,

2021) Devolved healthcare financing involves funding at the sub-national government level.

In 2010, Kenya enacted a new constitution which saw the devolution of functions (which were previously the responsibility of the national government) to county governments. This therefore meant that these local governments were to receive a share of the national revenues to be able to continue with the running of these functions. The county governments were also expected to mobilize financial resources from

other sources to ensure adequate financing for their activities (Ghai & Ghai, 2021). The county governments in Kenya rely on various sources of funding, over and above what they receive from the national government. These include donors, health insurance schemes, private firms as well as individuals. The main challenges of healthcare financing in Kenya include stagnant or declining health budgets, poor health services, lack of equity and health system inefficiencies (Kenya Healthcare Federation, 2018).

The healthcare sector financial requirements are guided by the Kenya Health Policy (2014-2030), which is closely aligned to the achievement of the fourth Medium Term Plan (MTP IV) 2023-2027 and by extension, Kenya's Vision 2030 (Ministry of Health Kenya, 2017). Financial disbursements over time however, indicate that the national government allocation to the public health sector not only falls below the 15% of total expenditure budget agreed upon in the Abuja Declaration, but also that Kenya has been drastically reducing the funding to the health sector over the years.

In 2011, for example, Kenya invested 7.20 Kenya Shillings out of every 100 Kenya Shillings on healthcare, but by 2014, it had drastically reduced this investment to 5.70 Kenya Shillings for every 100 Kenya Shillings; even though the country's budget had increased during the same period (Kimathi, 2017). For the 2018/2019 period, the Kenya Health Policy (2014-2030) set the financial resource requirement at Kenya Shillings 115.86 billion; however, only Kenya Shillings 70.36 billion was allocated to the health sector (Ministry of Health Kenya, 2017).

Liaropoulos and Goranitis (2015) also note that while healthcare is a critical part of an economy and therefore must be funded, the critical financial issues of who pays the health bill and how sustainable the health financing is, have not been given due attention, yet this is a fundamental concept in the economics of healthcare policy. The focus on these two issues needs to gain importance, especially due to the fact that there are other competing interests in the economy which place a strain on the sustainability of

financing supplies. The indicators of devolved health financing in this study will be: sources of healthcare financing, levels of financing and accountability. The influence of these indicators on service delivery in county government public hospitals in Kenya will be determined.

### **Empirical Review:**

#### **Devolved Healthcare Financing:**

A study by Kairu, *et al.* (2021) in Kenya found that: greater focus and financing was awarded to the Level 5 and 6 (secondary and tertiary, respectively) health facilities (at 70% of the budget), yet it is the primary care facilities (Level 4 and below) that provided most health services. This therefore made access to healthcare services by the poor highly limited. At the health facilities as well, the budget for salaries and benefits for staff stood at 50%, therefore leaving only 50% for purposes of medical and drug supplies and operations and recurrent expense, therefore limiting the availability of the essential medical supplies to the patients. The study recommended that Kenya address the deteriorating health status, while at the same time come up with pro-poor medical policies.

Chitah, Chansa, Kaonga, and Workie (2018) conducted research in Zambia to examine whether the many healthcare financing reforms that had been put in place had benefitted the poor. The results revealed that the utilization of healthcare services as well as the distribution of health subsidies mainly favored the richer populations. The study concluded that Zambia had still not accomplished its vision of ensuring that its entire citizenry had equitable access to quality healthcare.

Behera and Dash (2018), in their study on the Indian government prioritization of healthcare expenditure, examined the relationship between the government's expenditure on healthcare and the fiscal space, which includes issues of borrowings, tax- and non-tax revenue and fiscal transfers. The conclusion of the study indicates that with higher dependency on borrowings and lower domestic revenue mobilization for purposes of healthcare financing, there will be fiscal stress

on the country's finances in the long term and therefore in turn reduce healthcare funding.

Nduhura, Nansamba, Akakikunda and Muhammad (2022) in their study of Lyantonde Hospital in Uganda deduced that an increase in government funding increased health service delivery. They therefore concluded that government healthcare financing should increase and also be made timely so as to improve healthcare service delivery.

## Research Methodology

### Research Philosophy

This study predominantly employed the positivism philosophy which adheres to the view that the social world must be observed and understood from an objective perspective and therefore, the researcher must be independent of the study they are carrying out and only what is observable and measurable can be trusted as factual. The researcher's role in this study was therefore limited to data collection and interpretation and will be dissociated from the subject under study (Dudovskiy, 2018). The positivist research philosophy was selected since this study has used existing theories for purposes of developing hypotheses which will be tested.

### Research Design

This study applied the qualitative research design, even as it seeks to gain understanding of the relationship between devolved healthcare financing and service delivery in county government public hospitals in Kenya, by making deductions from the perspectives of the data collected.

### Target Population

The target population of this study included hospital employees at the level of Medical Officers (MO), Nursing Officer in-charge (nurses) and the Health Administrative Officer and nursing mothers due for discharge. These were selected from the 137 public referral hospitals in Kenya. This study adopted an approach where both the service providers and the service recipients were included to find out what they think about service

delivery in county government public hospitals in Kenya. The population was over 10,000.

### Sample Size and Sampling Technique

The multistage sampling technique was used for this study. It divided its target population into counties, under several regions, which was used as the strata in the study. Stratified random sampling was then used to create different strata of employees involved in operations. By simple random sampling MOs, nurses, Health Administrative Officer (HAO) and Nursing Mothers (NM) were selected from each of the 137 hospitals. For the nursing mothers, these were selected through purposive random sampling since this was on a voluntary basis. Data was collected from a sample size of 385 respondents. The sample size was calculated using the following formula given by Mugenda & Mugenda (2003).

$$n = \frac{Z^2 pq}{d^2}$$

Where:

n = the desired sample size (If the target population is greater than 10,000)

z = the standard normal deviate at the required confidence level ( Z= 1.96 for 95% confidence level)

P= the proportion in the target population estimated to have characteristics being measured (0.5).

q = 1-p (1-0.5=0.5)

d = the level of statistical significance (confidence interval, expressed as decimal (0 .05 = ±5)

If there is no estimate available of the proportion in the target population assumed to have the characteristics of interest 50% should be used (Mugenda & Mugenda, 2003). The Z statistics is taken as 1.96 and desired accuracy at the 0.5 level. The study was done at 95% confidence level and 5 % level of significance. The population is greater than 10,000. The sample size therefore was:

$$n = \frac{(1.96)^2 (.50)(.50)}{(.050)^2} = 384.16 \text{ Respondents}$$

This figure was adjusted to 385 based on the proportionate calculation given above. To get the

study sample, the study was utilized a two-stage cluster sampling technique. Cluster sampling is an equal probability sampling method. This method was considered the most suitable technique for this study because there is no complete sampling frame of all the nursing mothers in the country. It was not practical to compile an exhaustive list of nursing mothers given the unpredictable nature of when they may be admitted, deliver, and feel comfortable to participate in the research.

The total population of the 4 selected clusters was over 10,000. The sample of individuals needed was 384, (adjusted to 385). To achieve this, the

study determined the number of MOs, Nursing in charge (NiC), Health Administrative Officers (HAO) and nursing mothers (NM) that were selected from each of the selected clusters. This was done by using proportion or sample weight of the population within the clusters (percentage cluster population from the total (4) clusters). The percentage of each cluster was used to determine the sample size for each cluster thus a total of 384, (adjusted to 385) respondents. Finally, all selected clusters were subjected to simple random sampling technique to get the required sample of 384, adjusted to 385.

**Table 1 Sample Size**

S/N	Administrative Regions	Cluster Population	Proportion sample weight %	MOs (n/4 Clusters)	NiC (n/4)	HAO (n/4)	NM (n/4)	Sample Size (n)
1	Nairobi	3	2	2	2	2	2	8
2	Coast	17	13	12	12	12	14	50
3	Nyanza	14	10	9	9	9	12	39
4	Western	12	9	8	8	8	10	34
5	Central	21	15	14	14	14	16	58
6	Rift Valley	37	27	26	26	26	26	104
7	Eastern	28	20	19	19	19	20	77
8	North Eastern	5	4	3	3	3	6	15
<b>9</b>	<b>Total</b>	<b>137</b>	<b>100%</b>	<b>93</b>	<b>93</b>	<b>93</b>	<b>106</b>	<b>385</b>

**Data Collection Instruments**

The researcher developed a questionnaire and an interview schedule for purposes of data collection. The questionnaire contained both closed and open-ended questions, with a Likert scale. The questionnaire was used to gather data from the hospital staff, while the interview guide was used to collect data from the nursing mothers (hospital clients).

**Pilot Test**

A pilot test was conducted on a small group of respondents from the target population to gauge whether the instrument had any design or structural weaknesses. Its purpose was to determine the validity and reliability of the research instruments. The pilot test constituted 10% of the target population (39 respondents). Once it was established that the research

instruments were both valid and reliable, the researcher proceeded to collect data from the target population.

**Data Analysis and Presentation**

Once the primary data collection process from the target population was completed, the raw data was cleaned, captured into the SPSS version 27, and then coded. The data was then subjected to various tests of assumption to check on the quality of the data. The data was then analyzed using both descriptive statistics as well as statistical modeling.

Mean, modes, frequency, and standard deviation tests were used to describe the data. Inferential statistical measures, on the other hand, apply inductive reasoning to allow the researcher to arrive at conclusions on the population under study, based on evidence found in the sample. The



statistical modeling aimed to show the type and magnitude of relationships that exist between the variables.

### Research Findings, Analysis and Discussion

#### Descriptive Statistics

The respondents were asked to give the level to which they agreed or disagreed with statements on each variable; the study used a 5-point Likert scale, where 1 = Strongly Disagree, 2= Disagree, 3= Neutral, 4=Agree and 5= strongly agree. The results provided were analyzed and the findings interpreted using frequencies (f), means (M) and standard deviation (SD) values.

The means show where the responses are concentrated while standard deviation indicates the variation of the response from the mean score. The values of standard deviations were used to determine convergence and divergence of views expressed by respondents on the statements. Low values of standard deviations show that respondents shared common views on the statements and large standard deviations indicate that respondents' views differed.

#### 1. Devolved Healthcare Financing

The respondents were asked to indicate their level of agreement with the statements given below on devolved healthcare financing. On the statement - who is your main source of financing? The

respondents indicated that healthcare in Kenya is funded by the national government (public), household (direct-out-of-pocket payments), private sector and donors. Findings indicate that the government funding has been fairly consistent ranging from 47% in 2020, 44.5% in 2021, 47.6% in 2022 and 46.1% in 2023. Direct out-of-pocket payments by users varied as at 25.3% in 2020, 25.2% in 2021, 26.6%, & 26.0% in 2023. The private sector contributions varied as at 7.5% in 2020, 8.1% in 2021, 6.7% in 2022, 9.7% in 2023. The donor's contribution towards healthcare varied as 21.2% in 2020, 22.3% in 2021, 19.1% in 2022 and 18.1% in 2023. The key players in each of the categories are discussed.

Donors include NGOs, Faith Based Organizations; the private sector mainly includes health insurance schemes; direct-out-of-pocket payments include households' payments, while government funding was derived from both the citizens tax and the mandatory nation health insurance fund (NHIF) that has currently transitioned to the social health insurance fund (SHIF). The findings indicate that there are several sources of funding towards healthcare in Kenya with the largest contributor being the government. However, it is important to note that government funding majorly comes from taxes collected from the citizens, and NHIF collections.

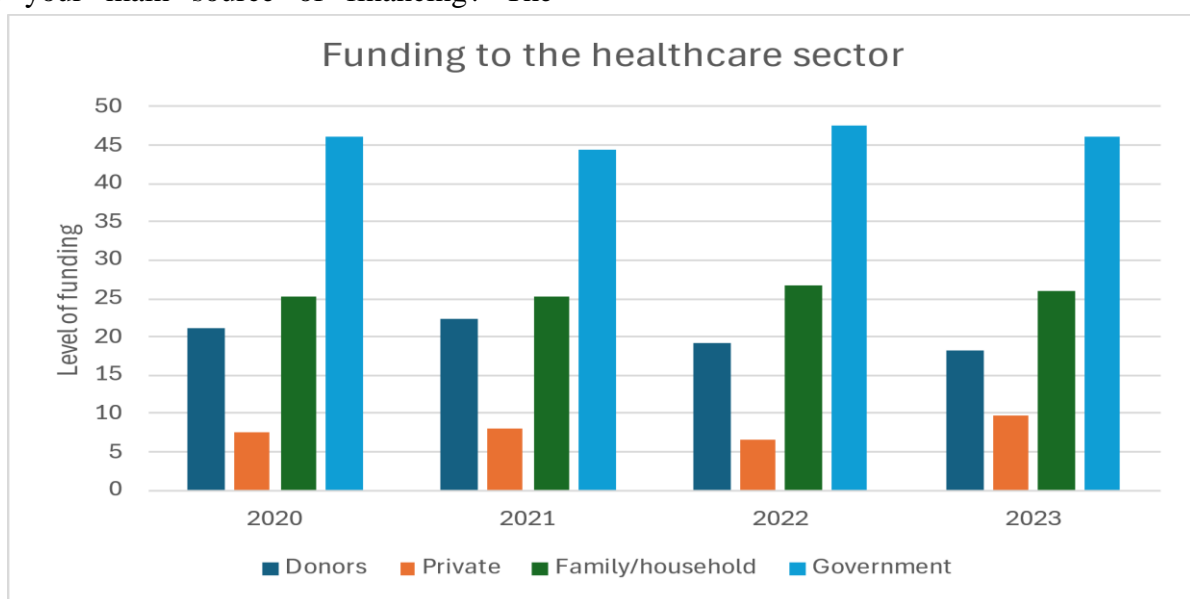


Figure 2: Devolved Healthcare Financing

## 2. Expected Level of Funding by Different Sources

The respondents were asked to indicate their opinions on the budgeted amounts expected from each of the given sources (by ticking against the correct box). The findings indicate that the government was expected to finance healthcare by 51-75%, while households were expected to finance healthcare between 26-50%. Both the private sector and donor funding were budgeted at

below 25%. By examining the results, it can be deduced that each of the three categories private sector, households /direct -out-of-pocket funding, and donors made a financial contribution that was commensurate with the budget. However, the findings indicated that the government funding was below what was budgeted for, hence putting more demand on households, given that donors and the private sector are rigid in their funding and highly bureaucratic.

**Table 2 Expected Funding by different Sources**

Source	Below 25%	26-50%	51-75%	Over 75%
Government			X	
Households/Direct-out- of pocket.		X		
Private	X			
Donors	X			

## 3. Financing Levels:

The respondents were asked to indicate their level of agreement with the statements given on the financing levels in the healthcare facilities in county governments. The findings are indicated in the table below. The findings indicate that there were mixed opinions on the statement that funds to the hospitals have increased after devolution with 48.8% of the respondents disagreeing, and 40.9% agreeing at (M= 3.25, SD= 0.98). A total of 44.6% of the respondents at (M=3.01, SD=0.742) agreed with the statement- healthcare financing after devolution has enhanced healthcare service delivery.

A total of 51.4% of the respondents at (M=2.80, SD=1.05) disagreed with the statement the amounts from the national government are received in a timely manner. On the statement, suggest how the devolved healthcare financing

can be improved, the respondents suggested the need for more transparency and accountability in terms of resource mobilization, utilization and accountability. Other suggestions were that there was need for more fund allocation, and that the counties should find other innovative means to raise funds to meet the huge healthcare needs at the county level. The findings agree with those by Chitah, *et al.* (2018) who observed that there was need for healthcare financing reforms to ensure adequate funding levels.

The overall mean was 3.02, meaning that most respondents agreed with the statements on financing levels. The highest mean was 3.25, meaning that most respondents agreed with the statement: funds to the hospital have increased after devolution. The lowest mean was: 2.80, meaning that most respondents disagreed with the statement: amounts from national government are received in a timely manner

**Table 3 Financing Levels**

Statements	SD (1)	D (2)	N (3)	A (4)	SA (5)	M	SD
Funds to the hospital have increased after devolution	20.9 %	27.9 %	13.3 %	30.9 %	10.0 %	3.2 5	.98 0
Healthcare financing after devolution has enhanced healthcare service delivery	22.8 %	17.9 %	20.7 %	23.9 %	20.7 %	3.0 1	.74 2
Amounts from national government are received in a timely manner	32.5 %	18.9 %	7.4 %	21.1 %	20.1 %	2.8 0	1.0 5

Overall mean 3.02

### 1. Intergovernmental Leadership

The second objective of the study was to determine the moderating effect of intergovernmental leadership on the relationship between devolved healthcare financing and service delivery. The respondents were asked to give their opinions on statements on intergovernmental leadership. The findings are presented below. Findings indicate that 49.7% of the respondents disagreed with the statement that there are clear and open channels of communication between the national & county governments at (M=3.215, SD=1.213). A total of 53.7% of the respondents disagreed with the statement that there is top leadership support to hospital initiatives at (M=2.524, SD=1.091). A total of 53.7% disagreed with the statement that the decision-making process is fast and participatory at (M=2.791, SD=1.676).

Findings indicate that a majority, 63.4% of the respondents disagreed with the statement that conflict resolution is fast & proficient at (M=3.119, SD=1.016). There were mixed opinions on the statement-the working relations between the two governments is professional-with 43.5% of the respondents agreeing with the statement and 45.8% of the respondents disagreeing with the statement at (M=3.498, SD=1.832). A total of 49.9% of the respondents agreed with the statement -there are clear roles for

the leadership of the national & county governments at (M= 3.698, SD =1.173). A majority at 56.5% of the respondents agreed with the statement that sometimes matters are politicized at (M=3.871, SD=1.238).

On the statement briefly explain how the intergovernmental leadership can be improved, the respondents suggested that there was need to ensure compliance with the legal framework, there was need to review and develop clear job descriptions and the scope to be clearly demarcated to prevent role overlap. Several respondents at about 52% felt there was need to design a framework for devolution and practically devolve healthcare without any influence, or interference from the national & county governments and other interested stakeholders. Respondents suggested that politicization was entrenched in the system and there was need for leadership review and professionalization of the system. These findings are consistent with those by McCollum *et al.* (2018) who in their comparative study found out that, governance at the sub-national levels was hindered by limited priority-setting capacity, poor community accountability, inadequate clear guidance, and previously existing negative contextual norms.

The overall mean is 3.25, meaning that most respondents agreed with the statements on intergovernmental leadership. The highest mean is

3.871, meaning that most respondents agreed with the statement: sometimes matters are politicized. The lowest mean is 2.524, meaning that most

respondents disagreed with the statement: there is top leadership support to hospital initiatives.

**Table 4 Intergovernmental Leadership**

Statements	1	2	3	4	5	Mean	Std. Dev.
There are clear and open channels of communication between the national & county governments	33.7%	16%	10.9%	22.8%	14.7%	3.215	1.213
There is top leadership support to hospital initiatives	40.4%	13.3%	10.4%	25.6%	10.3%	2.524	1.091
The decision-making process is fast and participatory	35.4%	21.9%	18%	10.9%	12.9%	2.791	1.676
Conflict resolution is fast and proficient	34.7%	28.7%	4.7%	20.8%	13%	3.119	1.016
The working relations between the two governments is professional	23.3%	22.5%	10.3%	30.5%	13%	3.498	1.832
There are clear roles for the leadership of the national & county governments	26%	10.8%	13.3%	30.2%	19.7%	3.698	1.173
Sometimes matters are politicized	13.7%	16.5%	13.3%	43.5%	13%	3.871	1.238

Overall mean 3.25

### 1. Service Delivery

The respondents were asked to indicate their level of agreement with the statements on service delivery. Secondary data from records was also reviewed. The findings are indicated in table 4.17 below. The findings indicate that 41.7% of the respondents disagreed with the statement that devolution has unlocked potential in healthcare and the citizens are beneficiaries of the same at (M= 2.790, SD=1.215). A total majority at 54.4% of the respondents agreed with the statement that devolution has brought healthcare services closer to the citizens at (M= 3.968, SD=1.465).

On the question: Do the services offered at your hospital provide what you would consider as quality healthcare? A total of 68.29% answered no. Majority explained that there were long lead

times whenever patients went for services, pharmacies were slow and sometimes lacked the prescribed medication, facilities like admission beds were not adequate, the admission process was overly long and the overall level of professionalism was low. Findings agree with those by (Agarwal, & Ganesh 2017). They opine that service delivery can be enhanced if quality healthcare strategies are put in place using the measures of process, structure and outcome.

The overall mean was 3.38. The highest mean was 3.968, meaning that most respondents agreed with the statement: devolution has brought services closer to the citizens. The lowest mean was 2.790, meaning that most respondents disagreed with the statement: devolution has unlocked potential in healthcare and the citizens are beneficiaries of the same.

**Table 5 Quality of Healthcare Services**

Statements	1 (SD)	2 (D)	3 (N)	4 (A)	5 (SA)	Mean	Std. Dev.
Devolution has unlocked potential in healthcare and the citizens are beneficiaries of the same	15.7%	26%	25.9%	20.8%	10.7%	2.790	1.215
Devolution has brought healthcare services closer to the citizens	21.4%	13.3%	11.4%	45.6%	8.8%	3.968	1.465

Overall mean 3.38

**Healthcare Affordability**

The respondents were asked to indicate their level of agreement with the statements on healthcare affordability. The findings are indicated in table 4.18 below. The findings indicate that 51.8% of the respondents agreed with the statement that devolution has made healthcare services more affordable at (M=2.777, SD=1.040). Another 46.5% agreed with the statement the number of babies delivered in the hospital has increased after devolution at (M=2.869, SD=1.018). A total of 39.95% agreed with the statement that since

devolution, the hospital has increased the number of outreach services in order to promote preventive healthcare at (M=3.698, SD=1.173).

The overall mean was 3.11. The highest mean was 3.698, meaning that most respondents agreed with the statement: since devolution, the hospital has increased the number of outreach services in order to promote preventive healthcare. The lowest mean was 2.777, meaning that most respondents disagreed with the statement: devolution has made healthcare services more affordable.

**Table 6 Healthcare Affordability**

Statements	1	2	3	4	5	Mean	Std. Dev.
Devolution has made healthcare services more affordable	24.7%	10.7%	14.7%	28.8%	23%	2.777	1.040
The number of babies delivered in the hospital has increased after devolution	13.3%	26.5%	13.3%	33.5%	13%	2.869	1.018
Since devolution, the hospital has increased the number of outreach services in order to promote preventive healthcare.	16%	10.8%	23.3%	20.2%	19.7%	3.698	1.173

Overall mean 3.11

**Availability of Drugs:**

The respondents were asked to indicate their level of agreement with the statements on the availability of drugs. The findings are indicated in table 4.19 below. A total of 49.8% of the

respondents disagreed with the statement- the doctor is at will to prescribe the best drugs since the pharmacy is well-stocked at (M=2.781, SD=1.012). Another 51.3% of the respondents disagreed with the statement the patients do not

have to purchase drugs outside the hospital since healthcare was devolved at (M=2.312, SD=1.351).

The overall mean was 2.55. The highest mean was 2.781, meaning that most respondents agreed with the statement: the doctor is at will to prescribe the

best drugs since the pharmacy is well-stocked. The lowest mean was 2.312, meaning that most respondents disagree with the statement: the patients do not have to purchase drugs outside the hospital since healthcare was devolved

**Table 7 Availability of Drugs**

Statements	1 (SD)	2 (D)	3 (N)	4 (A)	5 (SA)	Mean	Std. Dev.
The doctor is at will to prescribe the best drugs since the pharmacy is well-stocked	23.3%	26.5%	13.3%	23.5%	13%	2.781	1.012
The patients do not have to purchase drugs outside the hospital since healthcare was devolved.	23.3%	28.0%	13.3%	26.7%	7.9%	2.312	1.351

Overall mean 2.55

**Test for Hypothesis**

**1. Test for Hypothesis One**

**Linear Regression**

The first hypothesis stated that: **H<sub>01</sub>**: Devolved Healthcare Financing has no significant influence on service delivery in county government hospitals in Kenya. This hypothesis was tested by regressing devolved healthcare financing with service delivery and the findings were as presented in the table below. From the findings, the value of adjusted R<sup>2</sup> was 0.688. This implies that 68.8% of variations in service delivery in the

county governments public hospitals in Kenya can be attributed to changes in devolved healthcare financing. The remaining 31.2% variation in service delivery can be attributed to other aspects other than devolved healthcare financing. The study finding concurs with Nduhura, *et al.* (2022), who opine that increased government funding to the healthcare sector has a positive influence on healthcare service delivery and therefore government financing should be increased, as well as, delivered in a timely manner to improve service delivery in the hospitals.

**Table 5 Model Summary for Devolved Healthcare Financing on Service Delivery**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.843 <sup>a</sup>	.711	.688	.11695

a. Predictors: (Constant) Devolved Healthcare Financing

**Analysis of Variance:**

From the ANOVA findings, the p-value obtained was 0.000 which is less than 0.05, an indication that the model was significant. The findings also show that the f-statistic value (17.769) is greater than the F-critical value (F<sub>1,213</sub>=3.885). Since the

f-statistic value is greater than the f-critical value it shows that the model is reliable and had goodness of fit. It was concluded that devolved healthcare financing can be used to predict service delivery in the county government hospitals in Kenya

**Table 5 ANOVA for Devolved Healthcare Financing on Service Delivery**

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	0.249	1	0.249	17.769	.000 <sup>b</sup>
	Residual	2.982	333	0.014		
	Total	3.231	334			
a. Dependent Variable: Service Delivery						
b. Predictors: (Constant), Devolved Healthcare Financing						

**Beta Coefficients**

From the equation below, when devolved healthcare financing is held to a constant zero, service delivery in the county government public hospitals in Kenya will be at a constant value of 1.154. The findings also show that a unit improvement in devolved healthcare financing will lead to a 0.565 unit increase in service

delivery in the county government hospitals in Kenya. The findings also show that the t-statistic (4.360) has a p-value (0.000) which is less than the selected level of significance (0.05). Therefore, we reject the null hypothesis (**H<sub>01</sub>**) and accept the alternative hypothesis (**H<sub>A1</sub>**) and conclude that devolved healthcare financing has a positive significant influence on service delivery in the county government hospitals in Kenya.

**Table 6 Coefficients for Devolved Healthcare Financing on Service Delivery**

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.154	0.109		10.587	.000
	Devolved Healthcare Financing	0.565	0.125	0.843	4.360	.000
a. Dependent Variable: Service Delivery						

From the coefficients table, the following model was fitted:

$$Y = 1.154 + 0.565 X_3 + e$$

**2. Test for Hypothesis Two**

The second hypothesis stated that: **H<sub>02</sub>**: There is no significant moderating influence of intergovernmental leadership on the relationship between devolved healthcare financing and service delivery in county government hospitals in Kenya. On the variable devolved healthcare finance, the findings show that moderated variable (devolved healthcare finance\*intergovernmental

leadership) has a positive influence on service delivery in county government public hospitals in Kenya ( $\beta = 0.571$ ). The influence was significant since the p-value obtained ( $P = 0.00$ ) was less than the selected level of significance (0.05). Therefore, the introduction of intergovernmental leadership as moderating variable on devolved healthcare finance explains 0.571 units of service delivery compared to 0.539 explained when the variable is not moderated (model 1).

The study therefore deduces that, intergovernmental leadership has a positive influence on the relationship between devolved healthcare finance and service delivery in county government public hospitals in Kenya. Therefore,

we accept the alternative hypothesis: Intergovernmental leadership has positive significant effect on the relationship between devolved healthcare finance and service delivery in county government hospitals in Kenya

**Table 7 Moderated Coefficients for Overall Regression Model**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.484	.153		9.699	.000
	Devolved HC. Financing	.539	.071	.601	7.619	.000
2	(Constant)	0.854	0.189		4.519	0.004
	Devolved HCF*Inter LS	0.571	0.079	0.397	7.228	0.000
a. Dependent Variable: Service Delivery						

Key: HCF-Healthcare Financing; Inter LS- Intergovernmental Leadership

**Conclusion and Recommendations:**

**Conclusion:**

The study found that devolved healthcare financing had a strong positive significant relationship with service delivery with  $r = 0.843$ . The study further found that the influence was significant since  $p = 0.000$  which was less than the conventional 0.05 level of significance for this study, and that the variable could significantly predict service delivery (adjusted  $R^2 = 68.8\%$ ). From the regression findings, the study established that a unit increase in devolved healthcare financing resulted in 0.565 increase in service delivery. Also, when the variable was moderated with intergovernmental leadership, the model was still significant and it explained more variation in service delivery, suggesting that it was positively moderated.

The study also found out that the healthcare facilities in the counties received funding from different sources including the government, donors, the private sector, and households in different proportions. However, the funding was not adequate for the healthcare needs. The government funding was below the budget estimates. On the variable funding to the hospitals has increased since devolution, the study found out that there were mixed opinions. The findings also indicated that the funding was not received on time.

On the sub-construct financial management, the study found out that the counties were not doing very well since respondents noted that budgeting was not as participatory as expected, funds were not always used for the intended purpose, the financial accountability was not transparent, even though there were regular financial audit reports.



Nonetheless the study found out that devolved financing positively influences service delivery in the county government hospitals.

### Recommendations:

The study recommends that the national and county governments need to increase their funding levels to medical healthcare facilities for effective service delivery. Further, there is need for timely release of funding to the county governments. On the subconstruct financial management- the study recommends that all allocated funds must be used for the intended purpose, the budgeting process needs to be participatory and that there is need for transparency in terms of financial accountability.

There is also need for transparency and accessibility to financial audit reports in a timely manner. Further the study recommends that there is need for more transparency and accountability in terms of resource mobilization, utilization and accountability, there was need for the counties to find other innovative means to raise funds to meet the huge healthcare needs at the county level. The government needs to come up with innovative ways to reduce the huge burden on households in terms of healthcare.

### Areas for Further Research:

This study was limited to the devolved healthcare in referral hospitals in county governments in Kenya. The study recommends replication of the research study in other healthcare facilities of county governments to facilitate generalization of the research findings. The study also recommends similar study to be conducted in other ministries in the country to facilitate comparison of the research findings. The study focused on five factors (devolved healthcare infrastructure, devolved HR or health, devolved healthcare financing, devolved intergovernmental leadership) which accounted for  $R^2=71.9\%$  affecting service delivery; there is need for other studies to be conducted on other factors that affect service delivery, such as: organizational culture, monitoring, evaluation, learning and research as well as other environmental factors.

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