DETERMINANTS OF QUALITY OF HEALTHCARE DELIVERY IN DEVOLVED SYSTEMS: CASE STUDY OF LAMU COUNTY, KENYA

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International Academic Journal of Arts and Humanities (IAJAH) | ISSN 2520-4688

Received: 16th November 2022

Published: 29th November 2022

Full Length Research

Available Online at: https://iajournals.org/articles/iajah_v1_i3_85_101.pdf

Citation: Kimani, J. M., Moi, E. (2022). Determinants of quality of healthcare delivery in devolved systems: A case study of Lamu County, Kenya. *International Academic Journal of Arts and Humanities, 1*(3), 85-101.

ABSTRACT

Devolved government is a form of administration that is permitted by Article 6 of the Kenyan Constitution. Its two political and administrative arms, the Legislature, and the Executive, are divided among the 47 counties. Devolution helps to achieve this goal by distributing control, authority, and representation to local levels. The enactment of numerous legislations by Parliament to create the foundations for implementation and adoption has helped to realize the goals of devolution. The healthcare statistics for Kenya offer an unsettling picture due to a lack of medical facilities, staff, equipment, and supplies. In order to receive healthcare, patients may use over-the-counter medications, conventional medical services, or private healthcare facilities, while others may succumb to this circumstance. The purpose of the current study is to identify the variables influencing the provision of medical care services, with particular reference to Lamu County, Kenya. In particular, the study aimed to ascertain how government funding and the degree of service delivery quality affect health care delivery in Lamu County. A descriptive research design was used for this investigation. The 143,920 individuals that comprise the study's target group were both hospitalized patients and hospital-based healthcare workers. To select 399 respondents, a straightforward random sampling approach was used. The necessary sample size was calculated using the Yamane formula and a level of confidence of 95%. The researcher collected data using a semi-structured questionnaire. The researcher used the "Drop and Pick Later" data collection method to allow respondents sufficient time to respond to the study's questions. A pilot study consisting of ten respondents who were not included in the final poll was done. The reliability of the study was determined by calculating Cronbach's alpha, and an alpha of 0.7 or above indicated that the instruments were reliable. A combination of descriptive analysis and content analysis was utilized for analysis of the data collected. Descriptive analysis was used to investigate the quantitative elements, such as the size of the human resource, health facilities, the working hours, and the demographics of the respondents. On the other hand, content analysis was used to examine the theoretical conclusions of the research. The studied data was illustrated using frequency data tables, pie charts, and bar graphs. The study also came to the conclusion that the distribution of resources has a big impact on how well health services are delivered in Kenya. The study recommends that in order to enhance the delivery of healthcare services, both National and County should implement a set of deliberate and proactive processes, rules, and structures that support board size.

INTRODUCTION

Kenya's health vision aims to deliver adequate and affordable health care to all residents at the highest reasonable standard. The quality-of-service delivery in the public health sector has experienced considerable alterations worldwide, including (among other things) the reorganisation of healthcare delivery systems to shift the emphasis to preventative and promotive healthcare (Ministry of Health. 2013b). In an investigation involving 700 healthcare stakeholders, including patients, policymakers, providers, and managers of healthcare services, Donabedian (2016) discovered that healthcare service delivery is characterised by timeliness, availability, affordability, confidentiality, accessibility, and responsiveness. The United States, for example, is known to have excellent levels of quality health care, despite financial and insurance issues among individuals (Docteur & Berenson, 2015; Adams, Mounib, Pai, Stuart, Thomas & Tomaszewicz, 2016).

Most Sub-Saharan African countries are unable to provide acceptable quality and comprehensive healthcare coverage due to limited resources and economic factors (WHO, 2016). For example, healthcare in South Africa ranges from the most basic primary care provided by the government to specialized and high-tech therapies delivered in public and private facilities. Healthcare quality has suffered as a result of inequitable resource distribution, underfunding, poor administration, and failing infrastructure (Watts, 2017). Miriti (2017) investigated the influence of devolved government service delivery on health care delivery in Meru County. According to the author, devolution has improved access to healthcare services in terms of availability, pricing, accessibility, and acceptability. Gimoi (2017) assessed the impact of devolution on health care systems in Nairobi County Health Facilities. The study discovered that the condition of medical equipment had improved, and new equipment had been obtained.

Tsofa (2017) evaluated the effects of Kilifi County government health staff and supplies management. The study discovered that, like other county-level duties, administrative roles for essential medical supplies and medicines (EMSM) and health workforce (HRH) were progressively being devolved prior to the construction of relevant structures and sufficient ability to carry out these activities. As a result, increased worker remuneration delays occurred, as did the disruption created by politics and HRH administrative responsibilities, as well as uncertainty about HRH administrative tasks. National and municipal governments lacked clarity on their actions, tasks, worker strikes, mass compliance, and key roles.

Kenya has more than 4,700 health facilities designed to improve public health care delivery. Several health facilities have implemented Quality Management Practices to enhance the quality of the supplied services. The national government of Kenya has attempted to strengthen health care by transferring responsibility for health services to county governments (World Bank

Group, 2018). This study seeks to evaluate the factors of healthcare service delivery in Lamu County's health sector.

Statement of the Problem

Regardless of where they dwell, every Kenyan person is entitled to decent healthcare. Service delivery indicators in the Kenyan health sector include accessibility, timeliness, availability, cost, confidentiality, and responsiveness. Globally, the quality of service delivery in the public health sector has seen significant alterations. As a result of advancements in the healthcare industry, various issues occur, including the obsolescence of working skills, insufficient resources, and patient satisfaction. This immediately influences service delivery quality and responsiveness (Ndavi, Ogola, & Kizito, 2009). The distribution of health-related human resources with specialised education remains a difficulty. The health services provider-to-population ratio of 1.69/1000 for all cadres of health care is indicative of the sector's severe labour shortage (Rosenberg & Weissman, 2013). Healthcare management in Kenya has been transferred to County Governments under the new constitution. Thus, the execution of the health care criteria in several counties has presented several obstacles (Forman, 2010). Service model systems have been established in Lamu County to achieve competitiveness. These improvements include the introduction of modern medical equipment, increased budgetary investment for health, recruitment of additional human resources for health, enhanced health infrastructure, the introduction of health information systems and automation, and the provision of health insurance for the uninsured. However, despite these advancements, the health industry continues to suffer customer complaints, public outrage, and persistent supplier payment defaults. It directly influences the quality of service hospitals to provide, causing people to seek alternatives such as more responsive private healthcare facilities (Ministry of Health. 2013a). The number of recorded deaths attributable to carelessness and substandard health services has grown over time (Andel, Davidow, Hollander & Moreno, 2012). Lamu County has no health facility that scored above 60% for quality of health care service delivery (Lamu County Health Delivery Report, 2018). Despite this, relatively little assessment of the determinants of healthcare service delivery in the healthcare sector of Lamu County has been conducted.

Specific Objectives

The following were the study objectives.

1. To analyse how government financing affects the provision of services in the health sector in Lamu County
2. To determine the health sector's service delivery quality in Lamu County

LITERATURE REVIEW

Theoretical Review

The research study was guided by Agency theory and Stakeholder Theory.

Agency Theory

In 1976, Jensen and Meckling introduced this theory. The theory is founded on conflicts of interest among various contracting parties, namely shareholders (primary) and corporate management (agents). The principal-agent dilemma (principal-agent research) or governance systems are frequently studied through the agency theory lens (positivist research). In essence, agency theory stems from an economic perspective of risk sharing (Eisenhardt, 1989), which occurs between two parties, principals and agents, despite the fact that each party may have separate problem-solving approaches (Jensen & Meckling, 1976).

The concept of obligation delegation from principle to agent is a key component of agency theory. This is the underlying premise of devolution. Citizens, who are the principals of a society, commit the operation and management of the society to agents through the democratic process. In this case, the agents must make decisions or act in the best interests of their principals (Wagana *et al.,* 2015). This laid the groundwork for Kenya's new constitution to be approved in 2010. The principals sought to assign agents tasks that would result in higher rewards from their constituents (Buluma & Obande, 2015). To maximize the principal's interests, the agents would be better stewards of the principal's resources. Devolution is a sort of decentralization, or the transfer of power and responsibility for a variety of public operations from the central to lower levels of government, according to Williamson and Mulaki (2015).

Previous research has found that managers and staff prefer to pursue individualistic goals and emphasize their own interests (Bendickson, Muldoon, Liguori, & Davis, 2016; Bosse& Phillips, 2016), depriving the public of the benefits of decentralized services such as health care. People should not only have better access to healthcare, but they should also receive better care from qualified staff and in proper facilities. It would also be in the public's best interest to properly plan for healthcare facilities in order to ensure that healthcare is both affordable and sustainable for society. Delegating authority to a third party demands a constant assessment of the agent's performance to ensure that he or she is operating in the best interests of the principal.

Stakeholder Theory

Stakeholder theory was developed by Freeman (1994) on the premise that organizational affairs should take into account all stakeholders. According to the idea, executives should manage a

firm for the benefit of both its investors and stakeholders (Freeman, 1994). Stakeholders are organizations or individuals who are critical to a company's performance or existence, such as employees, members of the local community, shareholders, distributors, and suppliers. The evaluation of these individuals or groups is based on the assumption that their lack of support or goodwill would be detrimental to the growth of the organization or project (Freeman, 2004).

According to the stakeholders' theory, managers of public resources should consider the role of stakeholders in the management of such resources and act in the best interests of the public. This is congruent with the concept of devolution, which entails delegating political and economic resources in order to strengthen a country's participation in its development goals (McCollum *et al.,* 2018). The premise of devolution should be to stimulate the engagement of all stakeholders in resource management, the consequence of which can be more accurately recognized through empirical evaluation, as in the proposed research. The notion is that when lower-level executives are given more decision-making ability, they embrace stakeholder involvement in day-to-day operations.

The fundamental benefit of this approach is that it requires consideration of all players, which creates a firm foundation for a corporation's success. This helps to eliminate risks that could harm a company owing to disgruntled stakeholders (Freeman, 2004). It might be argued that the distinction between shareholders and stakeholders in the provision of public services is blurred, making the stakeholders' theory ideal for the proposed research. A healthcare administrator must be aware of healthcare workers, the general public, and medical providers, who all benefit from healthcare. This argument refutes Jones, Wicks, and Freeman's (2017) claim that the theory is overly difficult and impractical in practice.

Some critics argue that the theory's assumption that corporations should engage in social responsibility is flawed because organizations' primary objective is profit maximization (Ferrero, Michael, & McNulty, 2014). This viewpoint may be viable for profit-driven enterprises, but not for an organization whose primary aim is to offer public service, such as public healthcare. Healthcare leaders, on the other hand, such as healthcare administrators, should provide services that are particularly sensitive to the target audience as well as other stakeholders such as practitioners and supply chain actors.

Empirical Review

Government Funding for Service Delivery

Chen et al. (2021) conducted study on decentralized healthcare funding in Ghana, Uganda, Zambia, and the Philippines. The Philippines had the most difficulty with financial concerns, according to the report, because the allocation of funding to local governments did not match to

their obligations. The provinces responsible for the most expensive hospital received the least amount of funding, while the municipalities and Barangays with the least expensive treatment received the most. According to them, the problem was not the product of a local decision, but rather an error in the allocation method's general architecture. In virtually identical research conducted in Zambia, Chen et al. (2021) found that a strategy for allocating district budgets led to an extremely equitable per capita distribution among districts. As there may be epidemiological and cost differences between districts, they concluded that it may be useful to establish a need-based approach for distributing central funds among districts.

After Ethiopia adopted sub-national decentralization of health services, Van der Beken (2019) found that decentralization was more effective in regions that strengthened their management and institutional capacity and where regional governments were able to prioritize their needs and adapt corollary strategies to local needs. As a result, child and maternal mortality rates decreased; this may have been a result of the contemporaneous implementation of other health initiatives, such as increased personnel and resource allocation to health. However, decentralization was hindered by the clientelist power link between the center and the region, which was aggravated by the absence of accountability and community voice.

According to research undertaken by Ngure (2018) in Kenya on the equitable distribution of health care resources in the Kenyan health sector, there is a considerable regional inequality. Using both weighted and unweighted population, Western, Nyanza, and Northeastern regions appeared to be under-resourced in comparison to other regions. It also demonstrated a relationship between socioeconomic characteristics and the unequal distribution of health care services among provinces. According to interviews conducted at the central and district levels, a commitment to fairness exists in the health sector in theory, but rarely reveals itself in the process of resource allocation. At the central level, for instance, one respondent stated that Kenya is still a long way from reaching equality due to the fact that equality is documented but frequently disregarded during the resource allocation process.

Quality of Service Delivery in the Health Sector

The three policies implemented towards the close of the 20th century have guided and directed the provision of healthcare in Kenya. These policies include the Health Policy Framework from 1994, the Kenya Health Policy Framework Implementation Action Plan from 1996, and the Health Sector Reform Secretariat (1997). These rules were designed to guide the implementation process, which was intended to address restrictions such as the reported drop in health sector expenditures, the clear poor usage of resources, and decision-making without enough information, among others (George & Bula, 2021). Using a decentralized national health care system model with a focus on preventative care at the community and household levels, the

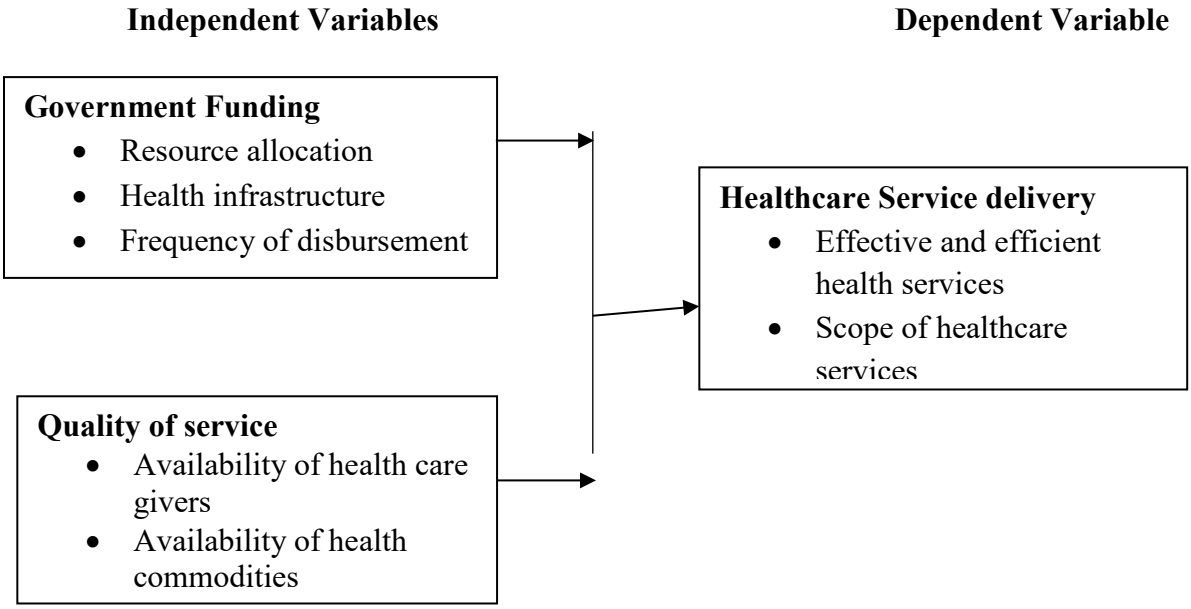
country's objective is to deliver effective, integrated, high-quality, and affordable healthcare for all inhabitants. Vision 2030 includes health as a social pillar.

Bengat, Bernard, and Joshua (2017) evaluated the determinants of service delivery in the health sector among selected Counties in Kenya and found that Public-Private Partnership positively affects Service Delivery after devolution of decision-making and funding to the Counties, as stipulated in the 2010 Constitution of Kenya and Vision 2030. The ratio for Public-Private Partnership is 1.907, which is less than 5, indicating that the model fits the data well. In addition, NFI = 0.900 and GFI = 0.911% are displayed. Robert et al. (2021) discovered significant relationships between organizational factors, interpersonal factors, environmental factors, and economic factors in their study of the factors influencing the provision of high-quality healthcare in Kasarani Sub County. The findings revealed that organizational, interpersonal, environmental, and economic variables accounted for 50,1% of the variance in the provision of high-quality healthcare in Kasarani Sub County.

Odefadehan and Adereti (2021) examined the determinants of rural women's utilization of primary health care services in Osun State, Nigeria. The patronage pattern of the primary health centres in the study region increased steadily over a five-year period (2014–18), and the majority of respondents (rural women) live an average of 1.85 kilometres away. Age of respondents, monthly income (0.018), a conducive environment, cleanliness of the environment, interpersonal relationships between staff and patients, timely diagnosis, and treatment of health problems by PHC staff, and ability of staff to prescribe effective drugs for treating diseases were all significant factors in the study.

These variables accounted for 73.6% of the variance in rural women's PHC utilization. Immunization and general medical care of disease were the two health treatments that women most frequently regarded as "always accessible." Kugonza (2016) examined public participation in service delivery in Buikwe District local government in Uganda and discovered that it is widely recognized as a means of advancing equality, building more trust, enhancing openness and answerability, and advancing equality and integrity in leadership at all levels. This research shows a contextual gap, since it focuses on general service delivery and public participation, but also includes leadership, resource allocation, and health policies and how these affect service deliveries in the public health sector.

Conceptual Framework



RESEARCH METHODOLOGY

In this study, a descriptive survey approach was used. According to Mayer (2017), a descriptive survey is a type of data collection that may be used to learn more about peoples' views, beliefs, habits, or any other social concerns by interviewing or giving a questionnaire to a sample of people. Both dependent and independent variables were included in this study's variables. The delivery of healthcare services in Lamu's health sector was the dependent variable, and government financing, the standard of the provided services, the institutional setting, and information technology were the independent factors.

Lamu County is among the 47 counties included in the first schedule of the 2010 Kenyan Constitution. The County, which includes the mainland and more than 7 islands in the Lamu Archipelago, has a population of 143,920 (KNBS, 2019). The County is situated on the country's northern coast and shares boundaries with the Indian Ocean, Tana River County, Garissa County, the Republic of Somalia, and Tana River County to the southwest, north, and northeast, respectively. Lamu County has three sub-counties namely, Lamu East, West, and Central. There are 45 healthcare institutions in the County in total, including one county referral hospital. The target populatioon for this study was 143,920. (KNBS, 2019). The Yamane formula (Yamane, 1973) with a 95% confidence level was used to estimate the optimal sample size. A total of 399 respondents participated in the proposed study, helping to gather data on certain areas of the county's delivery of healthcare services.

Both primary and secondary data was used in the investigation. The data was gathered from the pre-selected respondents in the Lamu County Government-managed health sector. Data was gathered by the researcher using a semi-structured questionnaire. Because they can be completed at the respondents' convenience and are suitable for large samples, the surveys are well-liked, the Mugenda family (2003). The researcher obtained secondary data from the cited yearly county reports. A combined strategy of descriptive analysis and content analysis was used to analyze the data that was gathered. The quantitative factors, such as the size of the human resource, health facilities, the working hours, and the demographics of the respondents, was examined through descriptive analysis. Tables and graphs were used as visualizations to present this. The Statistical Package for Social Sciences was used to perform the descriptive analysis of the data (SPSS). On the other side, content analysis was utilized to look at the research's theoretical conclusions.

RESULTS AND FINDINGS

The researcher dispatched 399 questionnaires to the selected respondents. However, 340 questionnaires were dully filled and returned to the researcher. This gave a response rate of 85.2% which is deemed sufficient for the study. Mugenda and Mugenda (2008) contend that a response rate of 50% is acceptable for analysis; response rate of over half is good while over 70% is very good. On respondents' gender, 53.8% of the respondents were male while 46.2% were female. This suggests respondents were drawn from all gender group to demystify any gender biasness that may have been related with the survey discoveries. On age distribution, 33.5% of the respondents were aged between 41 and 50 years, 27.1% were between 31 and 40 years, 21.8% were above 50 years while 17.6% were aged between 20 and 30 years. On the level of education, 45.9% of the respondents had bachelor's degree, 35.0% had diploma while 19.1% had master's degree. The significance of this is that the respondents included in the study were knowledgeable enough to understand the questions being posed to them in the questionnaires. On working Experience, 35.7% of the participants have worked between 11 and 15 years, 27.4% have worked between 6 and 10 years, 20.4% have worked for more than 15 years and 16.5% have worked for less than 5 **years.**

Resource Allocation

The first objective of the study was to assess the resource allocation for service delivery in the health sector. The respondents were requested to indicate their agreement level with each statement regarding to resource allocation on a scale of 1 to 5 where 1 (strongly disagree), 2 (disagree), 3 (moderate), 4 (agree), 5 (strongly agree). The results were presented in Table 1.

Table 1 Descriptive statistics on resource allocation

Statement	Mean	SDEV
Devolved resource distribution allows for adequate allocation of resources in the hospital	3.68	0.656
Devolution has allowed for timely provision of medical supplies for better service delivery	3.56	0.534
Devolved resource distribution has allowed for accountability in the utilization of resources	3.74	0.781
Devolved resource distribution has prevented long stock-outs of essential drugs in health facilities	3.62	0.653
Devolved resource distribution has enabled strong, responsive, efficient, and equitable distribution of health facilities in the hospital	3.67	0.578

Source: Field Data (2022)

The findings presented in Table 1 show that majority of the respondents agreed that devolved resource distribution allows for adequate allocation of resources in the hospital as indicated by mean of 3.68 and standard deviation of 0.656. The participants also agreed that devolution has allowed for timely provision of medical supplies for better service delivery as supported by a mean of 3.56 and standard deviation of 0.534. Furthermore, majority of the respondents agreed that devolved resource distribution has allowed for accountability in the utilization of resources as presented by a mean of 3.74 and standard deviation of 0.781. Health sector planning, budgeting and efficient financial management are key to ensuring rational prioritization and use of limited resources, and in responding to community priorities, broader political interests, and the fiduciary requirements of national bodies and external funders. The findings are in line with the findings of a study by Tsofa, Goodman, Gilson and Molyneux (2017) who established that decentralization has been an important element of the health system governance reform agenda for many years owing to its perceived importance in creating opportunities for strengthening local level management efficiency over ever-scarce health sector resources.

The findings further established that devolved resource distribution has prevented long stock-outs of essential drugs in health facilities as indicated by a mean of 3.62 and standard deviation of 0.653. Additionally, the respondents also agreed that devolved resource distribution has enabled strong, responsive, efficient, and equitable distribution of health facilities in the hospital as supported by a mean of 3.67 and standard deviation of 0.578. The findings were supported by Gimoi (2017) who established that the state of the medical equipment had improved and new equipment being bought. There was access to piped water and proper waste disposal as well as protected placenta disposal pits. Health infrastructure is key in restoring public perception of good quality care and achieving devolution goals on improvement of primary health care

facilities. The study revealed that devolution had an improvement on health infrastructure. Medical equipment was in good condition in most facilities and new equipment had been acquired under the medical equipment scheme.

Although it was noticed that the public finance act of 2012 was followed in the budgetary planning process for the health sector, equity in resource allocation was not seen. However, the interviewees generally agreed that the health department's funding allocation procedure has no criteria and is mostly driven by political factors. A number of stakeholders, including the community and the providers of health services, were also recognized as rarely participating actively in the budget-making process.

Quality of service delivery in the health sector

The second objective of the study was to determine the quality of service delivery in the health sector. The respondents were requested to indicate the extent of their agreement with each statement regarding to quality of service delivery on a scale of 1 to 5 where 1 (strongly disagree), 2 (disagree), 3 (moderate), 4 (agree), 5 (strongly agree). The results were presented in Table 2.

Table 2 Descriptive statistics on quality of service delivery

Statement	Mean	SDEV
The service delivery are affordable	3.64	0.644
The service delivery are accessible to all people	3.59	0.651
The service delivery are acceptable	3.57	0.675
The services given are relevance	3.67	0.601

Source: Field Data (2022)

The findings in Table 2 established that majority of the respondents agreed that service delivery are affordable as supported by a mean of 3.64 with standard deviation of 0.644. Respondents agreed that service delivery is accessible to all people as shown by a mean of 3.59 with standard deviation of 0.651. Respondents agreed that service delivery are acceptable as supported by a mean of 3.57 with standard deviation of 0.675. Additionally, respondents agreed services given are relevance as shown by a mean of 3.67 with standard deviation of 0.601. Improvement in health care delivery requires a deliberate focus on quality of health services, which involves providing effective, safe, people-centred care that is timely, equitable, integrated and efficient. The results are supported by Mosadeghrad (2014) who established that cooperation between the patient and the healthcare professional in a friendly setting results in quality healthcare. Healthcare service quality is influenced by personal aspects of the patient and provider as well as by organizational, systemic, and environmental factors. The availability of resources, effective management of those resources, staff, and processes, as well as collaboration and cooperation among providers, all contribute to higher healthcare quality. Additionally, consistent treatment

should be provided across several sickness episodes in public hospitals, and care for the individual should be coordinated amongst various teams and levels of care. Additionally, primary care should provide an all-encompassing array of services from conception to death as well as across the spectrum of disease burden.

CONCLUSION AND RECOMMENDATIONS

Conclusion

From the study results, it was concluded that resources allocation affect the quality of services offered by the devolved healthcare services in Lamu County. The introduction of the devolved systems was expected to increase the funding in the operations of health facilities, but this has not been appropriately met. Disbursement of funds has been delayed since the inception of devolution, and this has affected the delivery of services in terms of delay of medical equipment, drugs, and other operations within the facility.

The governance structures have been a significant issue in most of the health facilities in Lamu County. The research indicates that the management before devolution was better. Many health workers were promoted in the form of grades when they were under the national government, and this was a key motivation. The current governance in the health facilities have been affected by politics. Therefore, the study concludes that leadership and governance influence the provision of devolved healthcare services in Kenya.

Recommendation

Based on the findings of the study, the following recommendations are made:
Service charters in the county governments should reflect the health needs of the people and community participation be enhanced in health decision making. Strengthen community health strategy is critical.

The national government should ensure there is timely financing to the county governments. The county governments should also look for more sources of income other than depending only on the national government. By doing this, more financial resources will be available.

The study recommends that county governments should employ more health workers and offer training to improve their skills. Promotions should be enhanced and be based on merits to encourage them to work smart.

Though the county governments are in charge of health facilities, various leaders and stakeholders need to be involved in decision making. Leaders should be elected by staff in the

health centers based on merits since most of the appointments today come with political influence.

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