INFLUENCE OF DEVOLVED HEALTH SERVICES ON AVAILABILITY OF MATERNAL HEALTH CARE SERVICES IN ISIOLO COUNTY, KENYA

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ABSTRACT

Maternal healthcare entails the health of women from childbirth to the postpartum period. In Kenya, health services, including maternal healthcare, were devolved to county governments to improve coverage and accessibility and reduce inequalities—devolution aimed to enhance service delivery and reduce maternal and neonatal mortality rates. However, Kenya has not met its maternal mortality reduction targets, with marginalized counties like Isiolo experiencing higher-than-average rates. Despite devolution, health facilities in Isiolo struggle to meet the needs of mothers. Therefore, this study examines the influence of devolved health services on the availability of maternal healthcare services in Isiolo County. The sequential decentralization theorem guided the study. The study adopted a mixed-method, concurrent research design (QUANT +qual.). Quantitative data were analyzed using descriptive statistics (percentages and frequencies) and inferential statistics (ordinal logistic regression), while qualitative data were analyzed through thematic and content analysis. The findings indicate that devolved financing significantly influenced availability with p-value of 0.002. This implies that devolved financing and the workforce are crucial for improving availability of maternal healthcare services. The findings from this study provide important insights for the County Government of Isiolo, highlighting the need to enhance both financing and the workforce dedicated to maternal healthcare to improve availability of maternal healthcare services. Additionally, the study's results are valuable to maternal healthcare consumers in Isiolo County, as they are expected to stimulate discussions on policy-driven resource allocation aimed at improving availability of maternal healthcare services.

Keywords: Devolved health services, devolution, service delivery, availability, maternal health, Isiolo.

INTRODUCTION

Maternal health encompasses women's well-being throughout pregnancy, childbirth, and the post-natal period. It also includes family planning, preconception, prenatal, and postnatal care, all aimed at reducing maternal morbidity and mortality. Despite progress, poor maternal health remains a significant issue, particularly in developing countries. Globally, approximately one woman dies every two minutes from complications during childbirth. According to the World Health Organization (WHO), United Nations International Children's Emergency Fund (UNICEF), and United Nations Population Fund (UNFPA), the most recent estimates on Maternal Mortality Ratios (MMR)—maternal deaths per 100,000 live births—show that in 2020, the global MMR was around 211 maternal deaths per 100,000 live births across 185 countries (World Health Organization [WHO], 2023).

In Africa, countries like South Sudan had one of the highest MMRs at 1,150, followed by Chad at 1,140. Other countries with high MMRs include Nigeria (917), Tanzania (524), Uganda (375), Kenya (355), and Zambia (213). Regionally, sub-Saharan Africa continues to experience

alarmingly high MMR rates, with an average of 542, and the lifetime risk of maternal death is estimated at 1 in 37 women (WHO et al., 2021; United Nations Population Fund [UNFPA Kenya], 2024).

Like other sub-Saharan countries, the Kenyan health sector faced challenges of lack of infrastructure and equipment, poor retention and unmotivated workers, and poor coverage before decentralization. These setbacks contributed to inaccessibility and poor utilization of maternal healthcare services. The problems were more adverse in marginalized regions, thus increasing inequality. Additionally, women in rural Kenya faced transportation problems to distant health facilities, preventing them from seeking skilled maternal health care (Kitui et al., 2013). To address these issues, Kenya introduced devolution under The 2010 Constitution. Government services were devolved to the County governments, health services being among them. Kenya's health services were initially centralized, where decisions were made at the Ministry of Health (MOH) headquarters. The decisions were then passed top-down via the provincial medical officers to the district level. With devolution, the County government was mandated to manage the health sector within their counties to increase equity in accessibility and service delivery (Okech, 2016). Despite these efforts, maternal healthcare status has not yet reached international standards. Maternal deaths in rural Kenya are still high. Problems of accessibility to quality care centres are a significant setback contributing to high maternal mortality rates. The greatest challenge to reducing maternal deaths in Kenya lies in counties where maternal deaths are above the national average (Kilonzo et al., 2017a).

Isiolo County is ranked fifth among Kenya's 15 counties, and it has the highest maternal mortality rate. For every 100,000 live births, 790 mothers lose their lives (Mwaura et al., 2023; World Health Organization, 2023). A study evaluating MMR in Kenya between 2012-2018 shows that there has been continuous improvement across the 47 counties, however uneven coverage remains within each county because some counties are more deadly affected than others (Awe et al., 2023). Reports by Christian Aid and UK Aid show that the continued use of unskilled traditional birth attendants as primary caregivers is one of the Key causes making MMR persistently high in the County. Even with the devolution of health services, which aimed to provide healthcare services according to the local needs, Isiolo County health centres struggle to satisfy pregnant mothers' needs (Christian Aid, 2019). Therefore, this study examines the influence of devolved health services on maternal health care delivery.

Objective of the Study

This study was guided by the following objective:

i. To examine the influence of devolved health services on the availability of maternal healthcare services in Isiolo County

LITERATURE REVIEW

Johanson and Karlsson, (2016) propose a three-pointer of availability: supply of medical workforce, health facilities and specialized programs such as emergency care. The Social Protection Committee adds that availability is measured if the skills of the medical practitioners can meet the needs of the people. Bed capacity is also an important indicator (World Health Organization & UNICEF, 2018). Availability of infrastructure, supplies, medical care, and medical workers are necessary but not sufficient factors to enhance maternal health care. They do not guarantee client satisfaction. Health facilities should be available and easily accessible to offer 24-hour services with operational information desks for inquiries (Souza et al., 2013).

Sub-Saharan Africa includes 46 countries with substantial variations within and between them. Local factors must be considered in the planning and prioritization of health programs. These factors can be coverage and utilization of services at all levels of the health services, health services performance (i.e. availability of workforce, supplies and equipment, referral structures, adequate supervision), and platforms for scaling up interventions (Yitbarek et al., 2019). Only one out of ten facilities providing maternity care in Sub-Saharan Africa can perform a cesarean section, and often, these facilities perform operations without the essential infrastructure such as safe water, equipment and electricity (Friberg et al., 2010). Countries in sub-Saharan Africa need to improve their maternal health services to achieve lower MMR. They need to improve their facilities and train more workforce to increase coverage.

In Kenya, the 2010 constitution introduced a devolved system of governance through which many national government services were passed on to the 47 County governments newly formed (Kiambati et al., 2020). According to the Constitution, the National and County governments are interrelated, taking their interdependences through cooperation and consultations. The fourth schedule of the constitution provides distinctive roles and functions to be performed by the two governments. The County government is mandated to ensure the provision of ambulance services. The County government must ensure that all health facilities within the County have been allocated ambulances to facilitate faster transportation of patients. It is also the responsibility of the County government to ensure that all the facilities are well maintained and equipped with supplies and machines to ensure healthcare provision. In addition, the County government is mandated to facilitate easy access to health services and equitable sharing of national and local health resources among those in that particular County (Barasa et al., 2017). On the other hand, the national government is responsible for offering leadership in health policy development and managing the national referral hospitals (Barasa et al., 2017; Masaba et al., 2020).

Despite the sharing of responsibilities by the different levels of government, studies show that maternal deaths remain a key problem affecting maternal healthcare (Ahmed et al., 2010). Moreover, eliminating delivery fees in the country's public health facilities addresses the economic barriers to maternal healthcare service utilization (Cheptum et al., 2014). Majorly, the gaps identified fall under the responsibilities mandated by the county government. Therefore, this study aims to examine the influence of the devolution of health services on maternal healthcare service delivery by exploring to what extent the County government has met its responsibilities in availing maternal healthcare services to its people. The study will also explore what can be done to improve the availability of maternal healthcare services.

METHODOLOGY

Research Design

The study used a concurrent nested mixed methods design in which quantitative and qualitative data were collected simultaneously and integrated toward the end of the study.

Figure 1

Diagrammatic Representation of Concurrent Mixed Methods Research Design
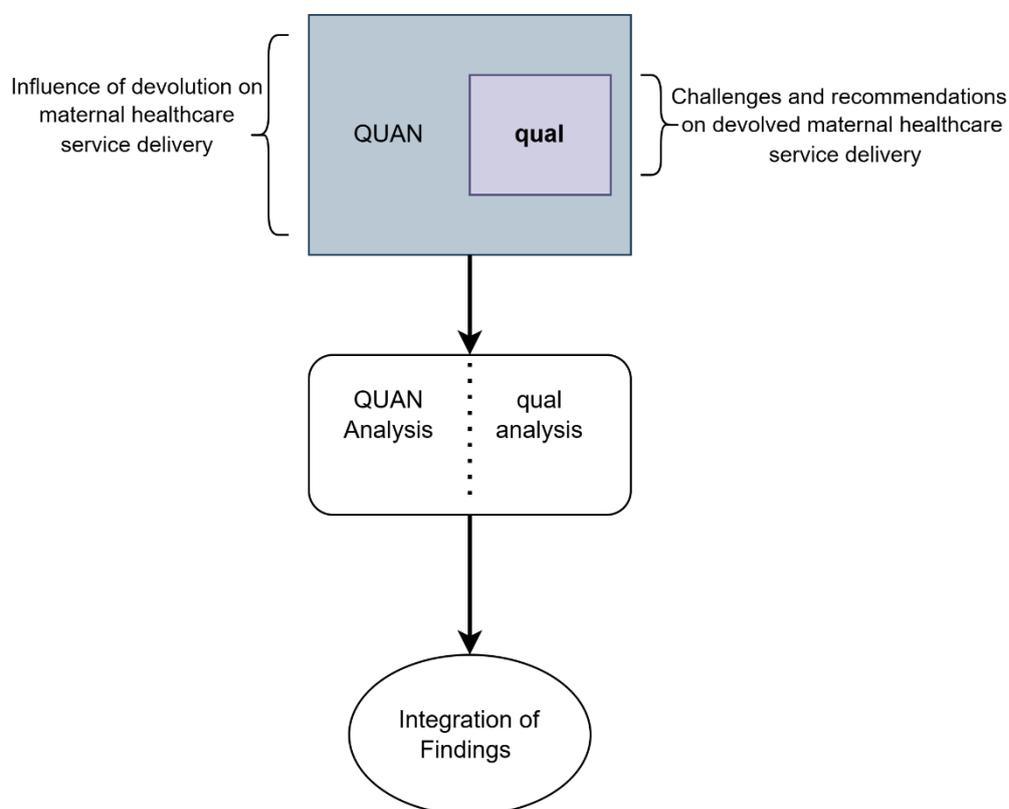
Quantitative data collected through a survey was dominant over qualitative data collected through in-depth interviews and Focus Group Discussions (FGDs) (Creswell, 2003). Figure 1 shows how data was collected, analyzed, and interpreted.

Sample Size and Sampling Procedure

Sample Size

A sample size of 149 participants was generated from the accessible population of 3, 245 service users using the following formula provided by (Nassiuma, 2000);

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

Where;

n=sample size

N=population size

C=Coefficient of variation, which is $\leq 30\%$

e=margin of error, which is fixed between 2-5%).

The study sample was calculated at 25% coefficient of variation and 2% margin of error.

$$n = \frac{3{,}245 * 0.25^2}{0.25^2 + (3{,}245 - 1)0.02^2}$$

$$n = \frac{202.8125}{1.3601}$$

$$n = 149.1159$$

$$n = 149$$

The sample size was 149 participants.

Table 1

Tabular Representation of Sample Size per participant's Type

Participants	Target Population	Accessible Population	Sample Size
Mothers	63,277	3245	149
County manager	1	1	1
Sub County managers	5	5	5
Facility in-charges	4	4	4
Total			**159**

The participants for the qualitative component comprised 10 KII participants, that is, the county and sub-county health managers (County Reproductive Health Coordinator [CRHC], Sub County Medical Officers for Health [SCMOH] [who are also the facility in charge of the level IV facilities], Sub County Reproductive Health Coordinators [SCRHCs] and Health centres in-charges from the sampled health centres). Twenty service users participated in a Focus Group Discussion (10 service users from level IV facilities and the other 10 from the level III facilities).

Sampling Procedure

The study utilized multi-stage sampling. The study used purposive sampling to select Isiolo County because of its high recorded maternal mortality rates besides having the lowest reproductive age population. Total sampling was used to select two government-owned level IV hospitals (Isiolo County Referral Hospital and Garbatulla Sub County Hospital) and four-level III hospitals (Merti Health Centre, Kinna Health Centre, Sericho Health Centre, and Gafarsa Health Centre) in Isiolo County. The study then used purposive sampling to select service users who received maternal health care services in the six selected facilities in 2024, convenient sampling was used to select 149 participants. From the sample size of 149, proportionate stratified sampling was used to sample participants from each facility. Finally, the study used random sampling to sample the study participants from each facility (stratum).

Purposive sampling was used in the selection of 1 CRHC, 2 SCMOHs (one from each Sub County), 3 SCRHCs (one from each Sub County), and four health facilities in-charge from the sampled Health Centres as key informants. Therefore, the study's qualitative research sample size was 10 health managers who participated in KIIs and 20 mothers who participated in an FGD.

Instrumentation

The instruments used to collect data in this study are the questionnaire, a Key Informant Interview guide and a Focus Group Discussion Guide. The questionnaire and FGD guide were administered to the service users, and the Key Informants Interview guide was administered to the service providers (Health managers).

Questionnaire

The study employed a researcher-administered questionnaire. The questionnaire contained open-ended and close-ended questions. According to Pribyls (1994), close-ended questions help to enhance the consistency of the responses, and open-ended questions enable participants to give personal views and comments, enhancing the validity and richness of responses. One hundred and forty-nine service users were administered with a questionnaire. The items on the questionnaire were based on the study objectives. The first section of the questionnaire has questions on the participants' background information. The second section has questions on devolved financing, devolved leadership and devolved workforce. The subsequent sections of the questionnaires cover questions on Devolution and maternal healthcare service availability, accessibility and acceptability.

Key Informants Interview Guide

 Key informants' interview guides are qualitative, in-depth interviews that help collect data from key people with first-hand knowledge or information on both devolution and maternal healthcare service delivery. In this study, the health managers and facility leaders involved in maternal health participated. The study used structured and semi-structured interview guides to collect data from key informants (Carter & Beaulieu, 1992). This study conducted Key informant interviews with 10 participants: 1 CRHC, 2 SCMOHs, 3 SCRHCs, and four health facilities in charge. The first section of the guide contains questions about devolved health services, and the second section has questions on maternal healthcare service delivery.

Focus Group Discussion Guide

A Focus Group Discussion (FGD) is a qualitative data collection technique in which a selected group of people (Participants) discusses a given topic or issue in-depth, facilitated by a professional, external moderator. This method serves to solicit participants' attitudes and perceptions, knowledge and experiences, and practices shared in the course of interaction with different (Van Eeuwijk & Angehrn, 2017). Of the 149 randomly sampled participants, 20 were purposively sampled to participate in FGD (10 people each). The study used an unstructured FGD guide, thus allowing in-depth information and more insights to be obtained, allowing participants to discuss their views and opinions on devolved health services and maternal healthcare service delivery.

Validity

To achieve construct validity, the study ensured that the study indicators and measurements were carefully developed based on the relevant existing knowledge (Abbott & McKinney, 2013).

Reliability

The questionnaire was administered randomly to thirty service users for piloting at Nyambene Level Four in Meru County Hospital, with service users who were receiving services during the piloting. The facility was selected for the pilot because it is located at the border of Meru and Isiolo County, hence presenting similar characteristics to those of the study sites.

The study used Cronbach's alpha coefficient to estimate the reliability of the instruments. To test the internal consistency of the questionnaire items, Cronbach's alpha coefficient was used to gauge the reliability. Cronbach's alpha coefficient is a statistic coefficient (a value between 0 and 1) used to rate an instrument's reliability. A correlation coefficient of .79 was obtained; thus, the instruments were reliable (Mugenda & Mugenda, 2003).

Data Analysis

Data was analyzed using both qualitative and quantitative data analysis techniques. The study used SPSS software to analyze quantitative survey data using descriptive and inferential statistics. The following descriptive statistics were used: frequencies, percentages, and mean. For inferential statistics, ordinal logistic regression (OLR) analysis was used to test for the influence of the predictor variable (devolution of health services) on the outcome variables (maternal healthcare service delivery) between several potential factors and each response. Participants' characteristics were reported using descriptive statistics. The qualitative data gathered through Key Informant interviews was analyzed thematically using Dedoose Software. First, the study began by transcribing the interview audio recordings to create textual data. Afterward, they read through the transcripts multiple times to become thoroughly familiar with the data. This was followed by the process of open coding, where segments of the data were identified and labeled with relevant codes. Once the data was coded, the study organized the codes into categories, identified patterns, and generated themes. These themes and their associated contents were then analyzed for further interpretation and understanding of the underlying patterns within the data.

RESULTS AND DISCUSSION

To explore the availability of maternal health services, the Likert scale statements were set to assess participants' perceptions on the availability of the infrastructure and other essential resources necessary for effective maternal healthcare service delivery in the facilities. Table 9 presents the findings from the participants' responses.

Table 2

Devolved Leadership Questionnaire Response Analysis

Likert Statement		SD	D	N	A	SA	Mean	SD
The facility offers 24-hour maternal healthcare services	Freq	1	19	27	91	3	3.54	.779
	%	.7	13.5	19.1	64.5	2.1		
This facility has a functional ambulance for emergency transportation for clients	Freq	1	8	6	120	6	3.87	.600
	%	.7	5.7	4.3	85.1	4.3		
This facility has the essential facilities (wards, NBU, Lab) to support delivery of essential maternal health care services	Freq	2	15	13	74	37	3.91	.952
	%	1.4	10.6	9.2	52.5	26.2		
The maternal healthcare units are well equipped with all the necessary equipment (thermometer, ultrasound) for service delivery.	Freq	1	10	7	88	35	4.04	.705
	%	.7	7.1	5.0	62.4	24.8		

The facility has adequate beds to accommodate maternal healthcare patients.	Freq	30	63	14	24	10	2.08	.767
	%	21.3	44.7	9.9	17.0	7.1		
The maternity wards are equipped with adequate baby cots to accommodate all the newborns.	Freq	8	79	39	13	2	2.45	.797
	%	6.7	56.0	27.7	9.2	1.4		
All maternal healthcare beds are fitted with mosquito nets	Freq	-	59	26	55	1	2.99	.918
	%	-	41.8	18.4	39.0	7		
The facility has a pharmacy where maternal healthcare patients get drugs.	Freq	3	5	17	57	59	4.16	.923
	%	2.1	3.5	12.1	40.4	42.8		

The findings indicate limited community participation in health governance, with most respondents (76.6%) disagreeing that community members were included in facility decision-making boards (M = 2.10, SD = 0.848). Skepticism about corruption was also evident, as 63.1% disagreed that hospital fund mismanagement had been reported, though the relatively high variability (M = 2.34, SD = 1.05) suggests differing experiences. Similarly, 65.3% disagreed with reports of nepotism (M = 2.57, SD = 0.759), although nearly one-fifth perceived or suspected its occurrence. Concerns were also raised regarding resource management, with 78% disagreeing that maternal health resources were properly managed (M = 2.16, SD = 0.788). Conversely, perceptions were more positive regarding institutional support, as 56.8% agreed that hospital management backed new maternal health programs (M = 3.43, SD = 0.649), and 60.4% believed devolved leadership was capable of delivering maternal healthcare services (M = 3.50, SD = 1.05). In summary, the findings indicate that while there is optimism about leadership and managerial support for maternal health programs within the devolved system, significant concerns remain regarding community involvement, transparency, and resource management. These governance challenges suggest that, while devolution has the potential to enhance accountability and responsiveness in maternal healthcare, addressing these issues at the county level is crucial for fostering more inclusive and efficient service delivery.

Ordinal logistic regression analysis was conducted to establish the influence of devolved health services on maternal healthcare service delivery availability. Table 6 presents the results of an OLR analysis examining the influence of devolved health services on maternal healthcare service delivery availability. It includes estimates for key factors (financing, workforce, and leadership), their standard errors, Wald statistics, significance levels, and 95% confidence intervals.

Table 3

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
Threshold	Avail_score	17.607	5.323	27.134	1	.000	7.296	17.509
Variable	D. financing	15.956	.359	20.324	1	.002	8.714	22.627
	D. workforce	6.494	.987	9.890	1	.089	-52.297	69.043
	D. leadership	4.140	.534	2.670	1	.102	-.826	.106

From the findings devolved financing emerged as the most significant factor, with b = 15.96, S.E. = 0.36, Wald = 20.324, and p < 0.002. This positive relationship indicates that increased devolved financing is strongly associated with improved availability of maternal healthcare services. Devolved workforce also showed significance, with b = 6.494, S.E. = 0.987, Wald = 9.890, and p = 0.089. This suggests that the workforce contributes to the availability of maternal healthcare services, though its significance is weaker than that of devolved financing. In contrast, devolved leadership exhibited weak significance, with Wald = 2.67 and p = 0.102. This indicates that devolved leadership alone does not have a statistically significant effect on the availability of maternal healthcare services, although it may enhance the overall model fit. Table 7 provides the model fitting information.

Table 4

Model Fitting Information

Model	-2 Log Likelihood	Chi-Square	df	Sig
Intercept Only	168.009			
Final	142.549	25.460	16	.000

The model fit was statistically significant $X^2 = 25.46$, p = .05, suggesting that devolved health services have a statistically significant influence on the availability of maternal healthcare services.

Qualitative Analysis of Group Interviews through Thematic Content Analysis Approach

The qualitative data collected provided valuable insights into the impact of devolved health services on the availability of maternal healthcare in Isiolo County. Participants noted that the county government has made significant efforts to construct new health facilities that were previously lacking and to enhance the infrastructure of existing ones. They emphasized that maternal healthcare services are now accessible 24 hours a day, with healthcare providers always available to assist patients. This commitment to improving service delivery demonstrates a positive shift in the landscape of maternal healthcare in the region as illustrated in the following quotes.

> P3*: The county government has really worked hard to ensure that at least in every ward there is a facility, even though it's a dispensary, also we have seen some renovations for our facilities like the Garbatula which was recently upgraded to level IV.* **FGD_2_P3**

> P1*: Some of the facilities are now offering services any time, even at night. Sometimes back they use to close earlier because of insecurity issue but now things have change.* **FGD_1_P1**

Conversely, participants identified several critical challenges impacting service delivery. Many expressed concerns about the ambulances, noting that there are times when they lack fuel, forcing patients or their families to cover the cost of fueling before transport can occur. FGD participants in the study noted:

> P6*…when they are looking for available ambulance. You can be told it has gone to pick blood from certain sub-county or even from =Kenyatta=.* **FGD_1_P6**

> P7: *Sometimes you are told the ambulance is there but there is no fuel, so you started looking for money to fuel the ambulance and also sometimes there is a fee you pay for ambulance services, it's not free.* **FGD_2_P7**

In terms of facility readiness, participants expressed dissatisfaction with the conditions of maternity wards. While some infrastructure facilities have improved due to devolution, there are still significant gaps. For instance, wards often lack adequate beds, and essential items such as mosquito nets and baby cots are insufficient. Additionally, the availability of critical medical equipment, like ultrasounds, remains inconsistent. This lack of essential tools can hinder timely diagnoses and effective treatment, affecting the overall quality of care.A FGD participants reported:

> P2: *You know county has really tried, there is a time we had baby Corts in the wards like when I had my first child, but now those things are not there, even the beds sometimes you share.* **FGD_1_P2.**

Qualitative Analysis of Interviews Conducted with Key Informants through Thematic Content Analysis Approach

The financing of the hospital appears adequate on paper, with budget allocations ostensibly meeting projected needs for the fiscal year. However, the reality on the ground tells a different story. Delays in the disbursement of funds have become a persistent challenge, disrupting operations and negatively impacting patient care. Doctors and nurses frequently experience delayed salaries, which not only affects their morale but also intensifies the financial strain on staff members who struggle to meet basic living expenses. This atmosphere of uncertainty undermines the dedication of healthcare professionals who strive to provide the best care despite these setbacks. As noted by the following participants:

> *We often wait months for the money that's supposed to come from the national government. When it doesn't arrive, we can't buy the medicines we need manage maternal services* **KII_CRHC_01**

> *...in reality, we're facing constant delays in fund disbursement...you have seen the frequent strikes by our healthcare workers due to dissatisfaction with system. **Probe if the strikes are because of delayed finances...**yeah but there are other issues, stagnation in the same job groups, working conditions is also an issue **KII_SCRHC_01***

Additionally, another pressing issue highlighted by participants was challenges in accessing Social Insurance Fund (SHIF) and the uncertainty around reimbursements from the Social Health Authority (SHA). These delays hinder healthcare providers' financial stability and disrupt the continuity of care for patients relying on insurance for maternal health services. Participants emphasized that such financial constraints ultimately impact the availability and quality of maternal healthcare, making it difficult for facilities to meet the needs of the community effectively. As one participant reported:

> *The delays from NHIF in reimbursing the facilities make it hard for us to plan. Without that money, we struggle to keep everything running smoothly, sometimes you find it comes very late, like even after 9 months.**KII_SCRHC_02***

The procurement of essential drugs further compounds the issues stemming from funding delays. While the Kenya Medical Supplies Authority (KEMSA) is meant to ensure timely delivery of pharmaceuticals, requests are often submitted late, leading to prolonged shortages. Healthcare workers report that critical medications are frequently unavailable, forcing them to ration supplies or seek alternatives that may not be as effective. This delay in drug delivery not only hampers treatment plans but also places additional stress on medical staff who are already grappling with the financial instability caused by delayed salaries. The overall efficacy of patient care hangs in the balance, raising concerns about the system's ability to meet the community's health needs effectively:

> *...we often run low on essential medications **KII_SCRHC_05***

Facilities conduct Continuous Medical Education (CME) sessions to review complications from referrals, allowing staff to reflect on challenges and identify areas for improvement. These discussions are essential for fostering a culture of learning and empowering local teams to enhance patient care based on their specific experiences and needs. However, effective collaboration during emergencies is crucial, especially for facilities with limited staffing. In such cases, reliance on emergency medical teams (EMTs) becomes vital for ensuring timely and effective patient care. As participants described:

> *...the other thing should be the staffing because as you are asking about the EMT. Like we had a case yesterday, he came to my facility he picked a client from that point but because that time I was alone, I could not leave the facility to accompany the patient to this sub-county hospital **KII_Facility incharge_01***

> *...training of the personnel, adequate training that is...at least you have skills on all these emergencies and their management, they say that medicine is dynamic, it always keeps on changing **KII_SCRHC_01***

Discussions of the Present Study in Relation with Other Research Findings

The quantitative and qualitative findings are concordant with the study by Kilonzo et al. (2017b). Titled "Improving Access to Maternal Health Care through Devolution in Western Kenya," the mixed methods study by Kilonzo et al. (2017b) examines the impact of devolution on the four dimensions of access to healthcare. When it comes to the issue of availability, Kilonzo et al. (2017b) concluded that the devolution of health services has improved the availability of referral maternal healthcare. However, the situation is far from being resolved

because of challenges with aspects such as the quality of the infrastructure and critical support services such as ambulances. Overall, the qualitative and quantitative findings affirm the study by Kilonzo et al. (2017).

However, the qualitative findings are not aligned with the findings from other studies, most notably the qualitative studies by Kwoyiga (2010) and Barasa et al. (2017). Kwoyiga (2010) argues that the availability of healthcare services in a decentralized system is affected by shortcomings such as lack of equipment, staff shortages, and the quality of transport infrastructure. Barasa et al. (2017) conducted a qualitative case study to explore how hospital autonomy has changed in the devolved system in Kenya. Barasa et al. (2017) attribute the weakened leadership to devolution and argue that reduced hospital autonomy in the devolved system has negatively affected the availability of maternal healthcare services. There is consensus around how devolved health services have impacted the availability of maternal healthcare services and the challenges affecting the availability.

DISCUSSIONS

This study examined the influence of devolved health services on the availability of maternal healthcare services. The results of the study showed that there was a statistically significant influence of devolved health services on the availability of maternal healthcare services in Isiolo county.

CONCLUSION AND RECCOMMENDATIONS

Conclusion

Based on the findings of this study, the following conclusion was arrived at in line with the study objective. The conclusion of the study was.

i.   Devolved health services had a significant favourable influence on the availability of maternal healthcare services in Isiolo County; the influence was primarily driven by devolved financing. Increased financial resources under devolution substantially enhance the availability of these services.

Recommendation

This section presents the study's policy recommendation to the county government. The recommendation include:

i.   County governments should ensure that there are adequate healthcare facilities offering maternal healthcare services located close to the people to ensure accessibility and availability of maternal care.

REFERENCES

Abbott, M. L., & McKinney, J. (2013). Understanding and applying research design. John Wiley & Sons.

Ahmed, S., Creanga, A. A., Gillespie, D. G., & Tsui, A. O. (2010). Economic status, education and empowerment: Implications for maternal health service utilization in developing countries. PloS One, 5(6), e11190.

Awe, O. D., Kipruto, H., Awe, O., & Chukwudum, Q. C. (2023). Trend Analysis of Maternal Mortality in Kenya: Post-Devolution Empirical Results. EA Health Research Journal, 7(2), 256–264.

Barasa, E. W., Manyara, A. M., Molyneux, S., & Tsofa, B. (2017). Recentralization within decentralization: County hospital autonomy under devolution in Kenya. PloS One, 12(8), e0182440.

Cheptum, J. J., Gitonga, M. M., Mutua, E. M., Mukui, S. J., Ndambuki, J. M., & Koima, W. J. (2014). Barriers to access and utilization of maternal and infant health services in Migori, Kenya.

Christian Aid. (2019). Maternal health in Isiolo County: Stories of change from Kenya. 8.

Creswell, J. W. (2003). Research design. Sage publications Thousand Oaks, CA.

Friberg, I. K., Kinney, M. V., Lawn, J. E., Kerber, K. J., Odubanjo, M. O., Walker, N., Weissman, E., Chopra, M., & Black, R. E. (2010). Sub-Saharan Africa's Mothers, Newborns, and Children. PLoS Medicine, 7(6), 8.

Johanson, M., & Karlsson, L. (2016). Service architectures for product and production availability: A system of systems approach. 1–6.

Kiambati, K., Chege, A. K., Mwenja, D., & Mbugua, L. (2020). Human Capital Development and Services Delivery of Public Health Facilities.

Kilonzo, S., Kamaara, E., & Magak, K. (2017a). Improving Access to Maternal Health Care through Devolution in Western Kenya. IDS Bulletin, 48(2). https://doi.org/10.19088/1968-2017.118

Kilonzo, S., Kamaara, E., & Magak, K. (2017b). Improving access to maternal health care through devolution in Western Kenya.

Kitui, J., Lewis, S., & Davey, G. (2013). Factors influencing place of delivery for women in Kenya: An analysis of the Kenya demographic and health survey, 2008/2009. BMC Pregnancy and Childbirth, 13(1), 1–10.

Kwoyiga, L. (2010). Health and decentralization: A study of the impact of decentralization on health services in Ghana.

Masaba, B., Moturi, J., Taiswa, J., & Mmusi-Phetoe, R. (2020). Devolution of healthcare system in Kenya: Progress and challenges. Public Health, 189, 135–140.

Mugenda, O., & Mugenda, A. (2003). Research methods: Quantitative and Qualitative methods. Revised in Nairobi.

Mwaura, H. M., Kamanu, T. K., & Kulohoma, B. W. (2023). Sub-national variation in indicators of maternal mortality in Kenya requires targeted interventions to fast-track SDG attainment.

Okech, T. C. (2016). Devolution and universal health coverage in Kenya: Situational analysis of health financing, infrastructure and personnel.

Souza, J. P., Gülmezoglu, A. M., Vogel, J., Carroli, G., Lumbiganon, P., Qureshi, Z., Costa, M. J., Fawole, B., Mugerwa, Y., & Nafiou, I. (2013). Moving beyond essential interventions for reduction of maternal mortality (the WHO Multicountry Survey on Maternal and Newborn Health): A cross-sectional study. The Lancet, 381(9879), 1747–1755.

Van Eeuwijk, P., & Angehrn, Z. (2017). How to… Conduct a Focus Group Discussion (FGD). Methodological Manual.

World Health Organization & UNICEF. (2018). Monitor, evaluate, improve: TDR results 2017 report: Measuring for improvement. World Health Organization.

World Health Organization. (2023). Trends in maternal mortality 2000 to 2020: Estimates by WHO, UNICEF, UNFPA, World Bank Group and UNDESA/Population Division. World Health Organization.

Yitbarek, K., Adamu, A., Tsega, G., Siraneh, Y., Erchafo, B., Yewhalaw, D., Tekle, F., & Woldie, M. (2019). Technical Efficiency of Maternal and Reproductive Health Services in Public Hospitals of Oromia Regional State, Ethiopia. Health Services Insights, 12, 117863291983763. https://doi.org/10.1177/1178632919837630.