FACTORS INFLUENCING THE IMPLEMENTATION OF HEALTHCARE PROJECTS: THE CASE   OF MERU COUNTY, KENYA

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ABSTRACT

The devolving of national government functions in Kenya especially the implementation of health care is influenced by various factors in the expedition process of these projects. This study investigated the issues that influence the implementation of health care projects under the devolved system of governance. It investigated the influence of: collaborations of communities, distribution of human resources for health, financing of human resources for health and health infrastructure and learning and adoption of best practices. The study was hinged on four theories; Empowerment Theory, Theory of Optimal Resource Allocation, Theory of Fiscal Decentralization and Organizational Learning Theory. The study employed descriptive survey research design. Target population was 703 respondents. The sample size was of 15 (n=15), Meru County Government Department of Health Staff, 224 (n=224) Medical personnel working at public hospitals managed by the Department of Health Meru County and 10 (n=10) Health Civil Societies' Managers that were selected to participate in the study. Stratified sampling and Simple random sampling were used to pick the respondents. Questionnaires were used to collect data in the study locale. Data was analyzed qualitatively and quantitatively using Statistical Package for the Social Sciences (SPSS) version 22.0, was presented in Frequency and Percentage tables and the regression model $Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$ was applied. The study established that collaboration of communities, distribution of human resources, financing, learning and adoption all influenced the implementation of health care projects under devolved system of governance in Meru County, Kenya. Many of the respondents as shown by a mean of 3.74 agreed that collaboration of communities significantly influenced the implementation of county funded health care projects' sustainability. A good number of the respondents as shown by a Mean of 3.77 agreed that the successful implementation of county funded healthcare projects was influenced by the distribution of human resources for health in Meru County. Further, the results of this research as shown by a mean of 3.87 have revealed that health grants are not utilized due existing corruption adversely influencing the implementation of health care projects at the devolved governance level. 65.6% of respondents agreed that there was need to adopt performance appraisals and evaluations on medical personnel to enhance provision of health care services in the county under study. The study concludes that benchmarking is an important learning tool for medical personnel in enhancing of quality standards in health care provision, that adequate financial resources disbursed in good time are key drivers of the implementation of health care projects in Meru County. From the findings, the study recommends that an enforcement of Kenya's Health Policy 2011–2030 on distribution of human resources for health in public health facilities that the county government should adopt an effective stakeholder mobilization strategy that would help build working collaborations with other health sector players like Non-governmental Organizations.

Key Words: *implementation, healthcare projects, Meru County, Kenya*

INTRODUCTION

According to Bremner (2011), health care services provisions in the devolved system of governance refers to the various processes undertaken by sub-national governments through which inputs like; finances, human resources, equipment, medical drugs and other essential supplies are amalgamated to facilitate the delivery of health interventions to the populace. White, (2011) observes that it is the lack of one or several of these inputs that influences the provision of healthcare in the devolved even at lowest level; primary care. Méndez and Torres, (2010) reported on challenges of distribution of human resources for health that did adversely influence the implementation of health care projects by regional governments for the provision of health services in Chile.

Loayza, Rigolini and Calvo-González (2014) reported that issues of financial planning and inadequate local taxation systems coupled with staffing of hospitals did have a negative influence on the implementation process of health care projects and the provision of health services by municipal governments in Peru. Challenges related to financing emanating from low levels of disbursements from the central government that contributed to bottlenecks of low staffing of HRH adversely influenced the implementation of health care projects that would have witnessed the provision of health services by municipal governments in Nicaragua (Mathauer, Cavagnero, Vivas & Carrin, 2010).

Devolution of the health care function has brought with it different results in Europe especially in matters health care projects. In Uzbekistan, Ahmedov et la., (2014) reported that the un-even distribution of human resources for health did adversely influence the implementation of health care projects by provincial governments derailing access to health care services in the remote areas of the country. In Serbia, Milicevic,Vasic and Edwards (2015) reported that bottlenecks related to distribution of human resources and financing did adversely influence both the implementation of health care projects and provision of health care services by municipal governments. Bordignon and Turati (2009) also reported that issues of financing of human resources for health and health infrastructure adversely influenced the implementation of health-care projects for provision of health care services by regional governments in Italy.

Costa-Font (2010) reported the existence of inequalities in the distribution process for human resources for health and the construction of better health care facilities emanating from poor intergovernmental relations and poor financial planning adversely influenced the provision of healthcare services by regional governments in Spain. In Denmark, Pedersen, Andersen & Søndergaard (2012) reported that the adoption of local taxation did improve on the ability of regional governments to finance the provision of human resources for health and implementation health infrastructure projects. Jelamschi, (2011) also reported that challenges associated with the migration of medical staff did adversely influence the implementation of health care projects and provision of health care services by district governments in Moldova.

In China, Chen (2013) noted that challenges of financing of human resources for health (HRH) and consequently distribution of HRH did negatively influence the implementation of health-care projects and provision of healthcare services by provincial governments. The unequal expenditure on health care did negatively influence the distribution of HRH and the provision of facilities that enhance provision of health care services to the populace in some prefectures in Japan (Hayashi & Oyama, 2014). Heywood and Choi (2010) reported that issues related to limited funding did adversely influence the implementation of health care infrastructure projects such as health care innovations by provincial governments at the district level resulting to high reliance to private sector providers in Indonesia.

Devolution of the health function for implementation of healthcare projects to enhance provision of this public service has had it fair share of challenges in Africa (Wunsch, 2014). Nannyonjo and Okot, (2013) reported that poor distribution HRH and in particular doctors who were fewer than nurses did pose challenges to local governments in their quest to implement health care projects and provide health care services especially in rural Uganda. In Kenya, Mwamuye and Nyamu (2014) underscored the importance of partnerships between civil society and county governments in the implementation of health care projects. Okech (2016) also reported that budgetary constraints and unequal distribution of human resources for health had adversely influenced the implementation of health care projects by county governments.

STATEMENT OF THE PROBLEM

The Constitution of Kenya 2010 brought with it devolution of power and the promise of better delivery of public services, for low income earning Kenyans. Though several health facilities have been built under devolution since 2014 and ambulances services have also improved owing to the purchase of new ambulance vehicles by several county governments, health care still remains a reserve of the privileged. This is evidenced by the fact that most health care facilities are understaffed, are also ill-equipped, lack drugs and other medical supplies, lack proper basic amenities such as toilets and clean drinking water (Kimanthi, 2015; Muchui, 2015). In Meru County, despite The Meru County Government having allocated Ksh. 1.7 billion in the financial year 2015/2016, frequent strikes by health workers coupled by lack of medical supplies have been reported to often paralyze operations at the Meru Level 5 hospital and other county health facilities leading to poor delivery of services to patients putting the lives of these patients in danger. Further, despite recent alarming reports of rising cases of cancer, with 15% of those referred to the Kenyatta coming from the study locale, the major county hospitals lacks proper equipment for proper diagnosis and treatment (Kimanthi, 2015). According to a Ministry of Health 2015 Oral report, Meru County has a dentist/patient ratio of 1:14,286 adversely affecting the provision of this health service to the populace in the county. Further, according to the Ministry of Health 2015 report on Meru County: Health at a Glance, the situation is made worse by the alarming doctor/patient and nurses/patient ratios which are currently estimated at 1:5,882 and 1:1,515 respectively. This leads to overworking of these sensitive human resources for health care consequently leading to poor quality health care services delivery especially in

subsectors such as maternal and child health (MCH), cancer and oral health (Changalawa, 2016). Changalwa (2016) also noted that the Meru County lacks a linear accelerator machine to treat cancer a disease that is growing at an alarming rate in the county and that available dialysis machines are not adequate. This study seeks therefore to investigate on the factors that influence the implementation of health care projects in the devolved system of governance in Meru County. Specifically the study will look at the influence of; collaborative communities, distribution of human resources for health, financing of health human resources and health infrastructure, learning and adoption of best practices. It recommends that issues such as; financing of human resources for health and health infrastructure and embracing of collaborations of communities in the form of public private partnerships for financing of medical equipment should be adopted and policy strategies should be formulated and implemented for the equitable distribution of human resources for health. County Medical staff and department of health non-medical staff should also be exposed to both international and national trainings for learning and adoption of best practices.

PURPOSE OF THE STUDY

The purpose of the study was to investigate factors that influence the implementation of health care projects by the Meru County government.

RESEARCH OBJECTIVES

1. To determine how collaboration of communities influence the implementation of health care projects.
2. To determine how the distribution of human resources for healthcare services influence the implementation of health care projects
3. To establish how financing of human resources for health and infrastructure influence the implementation of health care projects in Meru County;
4. To assess how learning and adoption of best practices influence the implementation of health care projects.

THEORETICAL FRAMEWORK

The study is hinged on four theories; Empowerment Theory, Theory of Optimal Resource Allocation, Theory of Fiscal Decentralization and Organizational Learning Theory.

Empowerment Theory

Fawcett, et al., (1995) proponents of the empowerment theory in the provision of health care advance that, there exist complementary influences that guide partnerships among different stakeholders in this public services sector. In this vein, they contend that for effective implementation of health care projects there must be an interactive empowerment process that incorporates; collaborative planning, governing, community action, capacity building and

community change (Fawcett, et al., 1995). On his part, Perkins and Zimmerman (1995) argued that collaborative empowerment is a responsive process that engages civil society organizations and other grant making organizations to bring about societal change that addresses community concerns such as health care. This takes the form of collaborative partnerships which borrow the principle of community participation through which partners with a common goal implement projects that affect the lives of local populations (Perkins & Zimmerman, 1995).

In adopting this theory, this study contends that collaborative partnerships are essential for effective implementation of health care projects (Butterfoss, Goodman & Wandersman, 1993). This theory relates to study variable collaborations of communities which advance the argument that collaborative partnerships initiated by devolved units in the health care sector with the civil society, traditional healers and the private sector positively influence the implementation process of health care projects.

Optimal Resource Allocation Theory

Developed by Laska, Meisner and Siegel (1972) the theory of Optimal Resource Allocation is based on the premise that tasks possessing a homogenous distribution of service times are risk of collapsing when resources are not uniformly allocated. In advancing the theory, they contend that the resource is required to perform a number of tasks by the source and that the source is glamorized with the assumption that it does possess at any given time capacity to randomly allocate fractional proportions of its service resources to one or more of its projects (Laska, et al., 1972). It is however required of the source to adopt strategies that will ensure that the apportionment of the resource is done in an optimal way that would enhance task completion time and decrease chances of project collapse (Laska, et al., 1972).

In adopting this theory, this study contends that for effective implementation of health care projects the existence of reliable strategies that would enhance an optimal allocation of human resources for health (HRH) is a requirement (Keshtkar, et al., 2015). This theory relates to study variable distribution of human resources which advances that without proportionate allocation of HRH that is; doctors, physicians, nurses and midwives, the process of implementation of health care projects would be adversely influenced.

Fiscal Decentralization Theory

Formulated by Oates (1972) the theory of fiscal decentralization is based on a premise that the decentralization of funds from national governments to sub-national governments meant for development would bring services closer to local citizen levels. Oates (1972) notes fiscal decentralization hinges heavily on the two concepts; efficient and effective allocation of financial resources for enhanced service delivery in the public sector. In this vein, Oates (2006) advances the arguments on the theory of fiscal decentralization which presupposes that sub-national governments are in a position to adapt outputs of public services to the preferences and particular

circumstances of their constituencies, as compared to a central solution that presumes one size fits all.

In adopting this theory therefore, this study contends that unlike the monopolistic environment enjoyed by national governments, devolved governments encouter stiff competition from their peers. It is such competion that necessitates constraints in budgetary growth and contributes the pressure for the efficient provision of services to the public for example through the implementation of responsive health care projects (Oates, 2006; Tiebout, 1956). Through the theory, this research also holds that fiscal decentralization can act as a critical vehicle to achieving sustainable development in the health care sector especially the implementation of projects if it is used to provide a logical framework for mobilizing local support and resources, and promoting participation among beneficiaries of these public service development programs (Porcelli, 2009).

Through the theory, the researcher also argues that fiscal decentralization should not be taken as the panacea for the implementation of public services projects such as health care projects. Its existence may not even necessarily produce positive outcomes if there is no fair and clearly defined mechanism for resource allocation and distribution. In fact, as it has been argued, fiscal decentralization could lead to Allocative inefficiencies, as well as poor accountability and governance (Seabright, 1996). This has been found to limit innovations in the provision of public sector services by devolved units of governance.

Organizational Learning Theory

Developed by Argyris and Schon (1978) the organizational learning theory is based on the premise that organizations need to create an environment that would enhance the acquisition of knowledge which would foster better processes in either product manufacturing or service delivery. Vera and Crossan (2004) proponents of organizational learning theory also advance that the theory is based on the premise that organizations can always learn new things and acquire capabilities that would enhance their performance. In the same vein, Kalling (2007) another proponent of organizational learning theory notes that learning for modern organizations has become a necessity as it leads to improved processes and the introduction of new and better services.

In adopting this theory, this study contends that for effective implementation of health care projects devolved governments need to create a climate that would enhance institutional learning for all its HRH (Miovic, Tesfu & Göök, 2010). This theory relates to study variable learning and adoption which advances that devolved governments ought to create learning environments either from their peers nationally or internationally through benchmarking a process that would lead to better implementation of health care projects due to the adoption of management processes such as; performance appraisal and evaluations, e-health applications and medical informatics.

RESEARCH METHODOLOGY

Research Design

This study adopted the descriptive survey research design to investigate on factors that influence the implementation of health care projects by devolved governance units in Kenya with reference to those implemented by the Meru County government. This design is more specific and accurate because it involves description of events in a conscientiously outlined way (Vogt, Gradner & Haeffele, 2012). This research design also illustrates the characteristics of a population fully (Fram, 2014).

Target Population

According to the Department of Health (DOH) Meru County Government, the study locale has 9 public hospitals under its management. The department has 23 non-medical staff and there are 670 medical personnel (doctors, nurses, clinical-medicine officers and pharmacists) in the public hospitals in Meru County. 10 Managers from registered health Civil Society Organizations (CSOs) operating in the study locale will also form part of the study respondents.

Sample Size and Sampling Procedure

Lohr, (2010) defines sampling as the procedure by which units of a population are selected as representation of the total population. Probability sampling techniques; Stratified and Simple Random sampling were used in this research study. This sample size was obtained by applying the formula:

$$Ns = (Np)(p)(1-p)$$

$$(Np - 1)(B/C)\,2 + (p)(1-p)$$

$$n = (Z^2 . PQ / \alpha^2)$$

From the formulae 249 respondents drawn from a targeted population of 703 will form the sample size for the study.

Research Instruments

Primary data for this study was collected through the use of questionnaires. According to Leedy and Ormrod, (2010) a questionnaire is a well-constructed research tool that enables researchers to acquire information from respondents on their characteristics, present and past behavior, code of conduct or attitudes and their beliefs and or reasons for action with respect to the topic under investigation. The questionnaire consisted of both closed and open ended questions. Closed questions consisted of a fixed set of questions that were answered by; Non-Medical Staff at the Department of Health Meru County, Managers from Civil Society and Medical personnel in all public hospitals in the study locale in a specified sequence and with a pre-designated response options. Section one requested the respondent to fill in his or her background information,

whereas the remaining 4 sections consisted of variables which the researcher researched on. The sections were; Collaborations of Communities, Distribution of Human resources, Financing and Learning and Adoption.

Pilot Test

A pilot study was conducted to address any unclear and or ambiguous items in the research instruments. Fisher, (2010) argued that, the accuracy of data to be collected is largely dependent on the data collection instruments in terms of validity and reliability which can only be established through a pilot test. The first step in conducting the pilot study involved selection and recruitment of participants by employing convenience sampling. The researcher then used 10–20% of the main sample size for conducting this study's pilot study (Neuman, 2011). The next step was to administer the research instrument (questionnaire) to the 50 pilot participants. Data entry and analysis was then conducted, results discussed with supervisor for ironing of errors and spotting of weaknesses in the research instruments.

Validity and Reliability of Research Instruments

According to *Kothari (2012)* the validity of a research instrument refers to the degree to which the instrument measures what it is expected to measure. This study adopted; content, construct and face validity. The researcher looked into content validity of the research instruments through constant consultations with supervisors from University of Nairobi with respect to variables and tests. This helped the researcher in establishing whether the chosen measurement tools include a sufficient and indicative set of items to cover the concept under study (Drost, 2011). Face validity was established by skimming through the surface of the research instruments; it involved the application of an objective and subjective overview of the questionnaire by the researcher's supervisor.

The study adopted internal consistency procedure, through which the researcher used Cronbach Alpha to check the reliability of instruments to be used in the study. To check reliability of the research instruments, the researcher also undertook a pilot study on a total of 50 respondents from different strata in main sample size. Alpha values range from scores below 0.5 being considered unreliable, 0.5 adequate and a coefficient of 0.7 is acceptable and while 0.8 and or higher demonstrating good reliability of study instruments (Trochim, 2006).

Data Collection Procedures

Primary data was collected through the use of questionnaires and this will be administered in person through the use of the drop and pick later method to the sampled respondents. Structured questionnaires were used because they were be easy to administer as each item is accompanied by choice answers and they will also be economical in terms of time and money (Saris, 2007). To ensure a good response rate is realized, a register of the questionnaires was developed that assisting in tracking of this research collection instrument.

Data Analysis

Quantitative data for each research question was also tabulated for purposes of providing the researcher with a comprehensive picture of how the data looked like and also assisting the researcher in identifying patterns. For reliable analysis, SPSS version 22.0 was used to analyze collected data and this was presented using descriptive statistic such as frequencies, mean, variance and standard deviation. Results of the analysis made it easy for the researcher to make valid conclusions on the topic of study. Content analysis was used to analyze data from open ended questions and the results from this analysis presented in themes as per the study's objectives. Frequencies and percentages were used to summarize information. A multivariate regression model was used to determine the relationship between the four variables and their relationship to the topic under study. Functions for the regression model are presented as:

$$Y = \beta_0 + \beta_1 X_1 + \varepsilon$$
$$Y = \beta_0 + \beta_2 X_2 + \varepsilon$$
$$Y = \beta_0 + \beta_3 X_3 + \varepsilon$$
$$Y = \beta_0 + \beta_4 X_4 + \varepsilon$$

The regression model is presented as: $\mathbf{Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon}$

Where: Y = Health-Care Projects Implementation under Devolved System of Governance; β_0 = Constant Term; β_1, β_2, β_3 and β_4 = Beta coefficients; X1= Collaborations of Communities, X2= Distribution of Human Resources, X3= Financing; X4= Learning and Adoption, ε = Error term.

RESEARCH RESULTS

Reliability Analysis

A pilot study on sample respondents was carried out to determine reliability of the questionnaires. Reliability analysis was subsequently done using Cronbach's Alpha, Tavakol and Dennick (2011) which measured the internal consistency by establishing if certain item within a scale measures the same construct. The Alpha value threshold at 0.7, Tavakol and Dennick (2011) thus forming the study's benchmark. Cronbach alpha was established for every objective which formed a scale.

Table 1: Reliability Analysis

Variable	Cronbach Alpha	No. Of Items
Collaboration of communities	0.793	4
Distribution of Human Resources	0.840	5
Financing	0.848	5
Learning and Adoption	0.915	7

The table shows that learning and adoption had the highest reliability (α= 0.915), followed by Financing (α=0.848), Distribution of human resources (α=0.840) and finally Collaboration of

communities (α=0.793) this illustrates that all the variables were reliable as their reliability values exceeded the prescribed threshold of 0.7.

Inferential Statistics

The data presented before on financing of human resources, distribution of human resources, collaboration of communities, learning and adoption of best practices and implementation of healthcare projects in the county were computed into single variables per factor by obtaining the averages of each factor. Correlations analysis and multiple regression analysis were then conducted at 95% confidence interval and 5% confidence level 2-tailed to establish the relationship between the variables. The research used statistical package for social sciences (SPSS V 22.0) to code, enter and compute the measurements of the Pearson's Product Moment Correlation and multiple regression.

Pearson's Product Moment Correlation

A Pearson's Product Moment Correlation was conducted to establish the strength of the relationship between the variables. The findings are presented in table 2.

Table 2: Correlation Matrix

		Implementation of healthcare projects	Financing of human resources	Distribution of human resources	Collaboration of communities	Learning and adoption of best practices
Implementation of healthcare projects	Pearson Correlation	1				
	Sig. (2-tailed)	.				
Financing	Pearson Correlation	.806	1			
	Sig. (2-tailed)	.029	.			
Distribution of human resources	Pearson Correlation	.603	.522	1		
	Sig. (2-tailed)	.016	.017	.		
Collaboration of communities	Pearson Correlation	.606	.742	.587	1	
	Sig. (2-tailed)	.028	.013	.018	.	
Learning and adoption of best practices	Pearson Correlation	.881	.543	.723	.521	1
	Sig. (2-tailed)	.056	.008	.003	.016	.

Results in table 2 reveal that there is a strong, positive and significant correlation between financing of human resources and implementation of healthcare projects in the county. (r = 0.806, p value= 0.029). In addition, the study reveals that the correlation between distribution of human resources and implementation of healthcare projects in the county is positive and significant (r=0.603, p value=0.016). Further, the study reveals that the correlation between collaboration of communities and implementation of healthcare projects in the county is positive and significant (r=0. 606, p value=0.028). Finally the study establishes that there was a very strong, positive and significant correlation between learning and adoption of best practices and

implementation of healthcare projects in the county. (r=0.881, p value=0.056). This implies that all the variables had a positive and significant correlation with implementation of healthcare projects in the County.

Multiple Regression Analysis

In this study, a multiple regression analysis was conducted to test the effect among predictor variables. The summary of regression model output is presented in table 3.

Table 3: Summary of Regression Model Output

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.926[a]	0.857	0.854	1.287

The study found that independent variables selected for the study (i.e. financing of human resources, distribution of human resources, collaboration of communities and learning and adoption of best practices accounted for 85.4% of the variations in implementation of healthcare projects in the county. According to the test model, 14.6% percent of the variation in the implementation of healthcare projects in the county could not be explained by the model. The study further tested the null hypothesis and significance of the model through the application of ANOVA procedure. Results are presented in table 4.

Table 4: Summary of One-Way ANOVA results

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	1724.82	4	431.205	177.250	0.000
1	Residual	416	171	2.433		
	Total	2012.82	175			

The study used ANOVA to establish the significance of the regression model from which an f-significance value of p less than 0.05 was established (p= 0.00 <0.05). The calculated F (177.250) was significantly larger than the critical value of F= 2.4344. This again shows that the overall test model was significant. Therefore, the null hypothesis; the entire above factors combined do not have a relationship with implementation of health care projects in the county is rejected.

Table 5: Regression Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	0.684	0.123		5.561	0.000
Collaboration of communities	0.604	0.187	0.443	3.230	0.002
Distribution of human resources	0.601	0.276	0.645	2.178	0.035
Financing of health infrastructure	0.796	0.342	0.676	2.327	0.025
Learning and adoption	0.861	0.156	0.792	5.519	0.000

The established multiple regression equation for predicting factors influencing implementation of healthcare projects in the county variables was:

$$Y = 0.684+ 0.604X_1 +0.601X_2 +0.796X_3 +0.861X_4$$

Where: Y= Implementation of healthcare projects in the county.

β_0=constant

$\beta_1, \beta_2, \beta_3$ and β_4 = regression coefficients

X_1= Collaboration of communities, X_2= Distribution of human resources,

X_3= Financing of Health Infrastructure, X_4= Learning and adoption of best practices

ε=Error Term

The regression equation above has established that taking all factors into account (collaboration of communities, distribution of human resources, financing of health infrastructure and learning and adoption of best practices) constant at zero, implementation of healthcare projects in the county was 0.684. The findings presented also show that taking all other independent variables at zero, a unit increase in the financing of human resources would lead to a 0.796 increase in the scores of implementation of healthcare projects in the county and a unit increase in the scores of distribution of human resources would lead to a 0.601 increase in the scores of implementation of healthcare projects in the county. Further, the findings shows that a unit increases in the scores of collaboration of communities would lead to a 0.604 increase in the scores of implementation of healthcare projects in the county. The study also found that a unit increase in the scores of learning and adoption of best practices would lead to a 0.861 increase in the scores of implementation of healthcare projects in the county.

Discussion of Findings

This section focuses on the discussion of the findings relative to what previous researchers have found on the study variables. It correlates the findings with those of the previous literature and establishes where they are in agreement or they contradicted.

Objective 1

In line with the first objective, the study noted that the need to cultivate working collaborations between county governments' departments of health and private companies in the health sector. The research revealed that these types of collaborations would enhance the provision of health care services in terms of enhancing E-health Pharmaceuticals and medical supplies stock management, the provision of opportunities for medical personnel to attend international benchmarking trips and the financing of cancer diagnosis and treatment units. The findings are in line with finding by Sandoval and Cáceres, (2013) who contend collabotations between regional governments and private sector health companies in Peru led to the financing of cancer fighting intiatives. However, the findings are in contrary to study by García-Goñi, et al., (2011) argued Autonomous communities worked in isolation adversely influencing the provision of health care services.

Further, the research revealed that collaborations between county governments were important for the realization of health care goals. The study notes that partnerships between county

governments addressed challenges associated with the provision of maternal and child health care (MCH) services to rural populations. This findings concur with the study by Nobuya (2011) argued that inter-prefectures partnerships led to the successful implementation of prenatal projects by these devolved governance units in Japan. The research revealed that there was an imminent need to build strong collaborations between county governments' departments of health and civil society organizations such as; Non-governmental Organizations (NGOs) and Community Based Organizations (CBOs). These types of partnerships would assist in addressing already existing challenges related to human resources for health (HRH) gaps; enhance the provision of equipment and technologies. The findings are in line with the study by Ejaz, Shaikh and Rizvi (2011) argued that provincial governments in Pakistan needed to strengthen collaborations with NGOs to address challenges associated with human resources for healthcare (HRH) and medical supplies. The findings are also in line with the research by Santana, Szczygiel and Redondo (2014) who found evidence indicating that collaborations of communities in the form partnerships between municipalities and private non-profit organizations resulted to the financing of HRH for MCH leading to decreased maternal and infant mortality.

Objective 2

The research revealed that failure by the county government to both hire more and evenly distribute midwives did lead to increased cases of maternal morbidity and infant mortality in remote areas of the county. This was also due to lack of human resources for health management information systems leading to the untimely identification of emergence of low numbers of HRH and in particular midwives. The findings are in line with the research by Groenewegen and Jurgutis, (2013) who argued that the lack of a reliable HRH allocation management system resulted to low midwives numbers adversely influencing MCH in the regions of Greece. The study also revealed that the county government had had failed to address the low number of clinical medical officers and doctors in public hospitals in every sub-county. This adversely influenced support health services provided by the clinical medical officers to doctors such as the provision of; dialysis services and addressing disability issues. It also negatively influenced the provision of major medical services provided by doctors such as cancer diagnosis and treatment and treatment of chronic diseases such as Tuberculosis (T.B). It was reported that this emanated from the existence of an unreliable human resources information systems (HRIS) that distributed more clinical medical officers to urban sub-county public hospitals than those in rural sub-county public hospitals. The findings are in line with the study by Feng, Li and Wu (2014) contend that more doctors and clinical medical officers were allocated to urban hospitals than in rural hospitals by provincial governments in China. The study also revealed that the county government had failed to address the low number of nurses in public hospitals in every sub-county. This leads to high numbers of maternal and infant mortality and also leads to high adult patient deaths due to chronic diseases such as Tuberculosis (T.B). It also adversely influenced the provision of health care services through mobile clinics. The findings are in line with those of

the study by Wakaba et al., (2014) argued that the existence of unreliable human resources information systems (HRIS) leads to uneven distribution of nurses to county public hospitals in Kenya adversely influencing of MCH services. The findings are however in contrary to the study by Heywood, Harahan and Aryani (2011) who contend that the existence of a reliable HRIS did enhance the even distribution of nurses by provincial governments leading to both reduced maternal and infant mortality rates in the provinces of Indonesia.

Objective 3

The research revealed that revenue raised through local taxation is enough however this failed to positively influence the provision of health care services through implementation of these types of projects. This emanated from high cases of corruption and political interference that led to fraudulent misuse public financial resources meant for the implementation of health care projects. The findings are contrary to the study by Ferrario and Zanardi (2010) who contend that regional governments raised low amounts of financial resources from local taxation for the implementation of health care projects in Italy. The study also revealed that funding disbursed from the central government was good enough and positively influenced provision of health care services at county level. This could be because the national government takes the health of its citizens seriously. The funds disbursed also influenced provision of health care services as they were used to finance the provision of human resource for maternal and child health. The findings are in line with the research by Soto, Farfan, and Lorant (2012) who argued that effective central governmental fiscal disbursement program departmental governments assisted the financing of human resource for maternal and child health consequently reducing the rate of infant mortality especially among low income populace in Colombia. The findings are however contrary to the research by Gené-Badia, et al., (2012) who argued that reductions on funds disbursed by the central government in Spain had negatively influenced the provision of health care services by Autonomous Communities. The study also revealed that the county government does not face budgetary constraints which adversely influenced provision of health care services. This is because the county received enough funds from the central government, raised enough taxes and received health grants from international governments. The findings are contrary to the research by Avlijaš and Bartlett (2011) argued that municipal governments in Serbia faced budgetary constraints due to low central government disbursements, low revenue from local taxes and the non-existence of health grants which negatively influenced provision of health care services.

Objective 4

The study also revealed that the county government had failed to adopt performance appraisals and evaluations for medical personnel. This leads to low motivation levels among HRH adversely influencing the provision of health care services. It also led to low HRH participation levels in county level implemented health care projects such as; community and mobile clinics and community disability health centres. The findings are in line with the research by Musyoka, Adoyo and Oluoch, (2015) argued that failure to adopt performance appraisals (PA) by county

health service managers adversely influenced the motivation of HRH in the sub-county public hospitals resulting to poor quality health care services. The county government had failed to fully utilize the benefits of benchmarking trips by its medical personnel to peer counties. This leads weak quality stakeholder mobilization strategies, monitoring and evaluation processes, financial management and low adoption of costs reduction processes adversely influencing implementation of health care projects. The findings are contrary to the study by Ettorchi-Tardy, Levif and Michel, (2012) contend that benchmarking trips positively influenced implementation of health care projects by regional governments in France.

The research revealed that e-health adopted by the county government influenced the implementation of health care projects. This was in the form of e-health mobile phone applications that enhanced the provision of health care services especially those related to MCH. The findings are in line with the study by Curioso, et al., (2010) argued that adoption of E-health application in mobile phones by a regional government in Peru did improve access to maternal and child health information (MCHI) leading to reduced cases of maternal mortality. It further revealed that medical informatics adopted by the county had not influenced provision of healthcare services. This leads to weak Scheduled Workflow (SWF) adversely influencing the availability of doctors, clinical medical officers and nurses for patients and negatively influenced ambulance orders due to the existence of a weak Ambulatory Testing Workflow (ATW). The finding is contrary to Barbarito et al., (2012) argued that the adoption of medical informatics by a regional government in Italy positively influenced the provision of health care services.

CONCLUSIONS

The study concludes that collaborations of communities had a direct influence on implementation of health care projects in Meru County, participation by other stakeholders in devolved units' implementation of healthcare projects facilitated the access to financial resources and supplementary human resources for health needed in the implementation of these projects and that collaborations of communities helped to build on local strengths, creativity for example the provision of mobile clinic and that collaborations of communities helped to align project needs to community specific needs that outside planners cannot.Collaborations of communities promoted the sustainability of community clinics and community disability health centres.

The study concludes that distribution of human resources for health influenced the implementation of health care projects in Meru County, the uneven distribution and the consistent existence of human resources for health (HRH) numbers had negative influence on the implementation process of health care projects and that lack of a reliable human resources information system (HRIS) crippled down the provision of health care services in Meru County.

The study concludes that adequate financial resources are key drivers in implementation of health care projects in Meru County, the rate of flow of health care projects' funds especially those disbursed from the central government to devolved units influences the implementation of

these projects, health care projects and the consequent provision of health services should have sound financial base arising from reliable sources of funding such as local taxation initiatives and that funds must be clearly designated and committed to the project so as to ensure successful implementation of activities without the possibility of stalling and subsequent abandonment.

The study concludes that learning and adoption had a direct influence on the implementation of health care projects in Meru County; implementation of health care projects under devolved governments in the country did rely on performance appraisals and evaluations, the adoption of e-health applications and medical informatics. That benchmarking is an important learning tool for medical personnel in terms of quality standards improving processes for the provision of health care services through health care projects implemented under the devolved system of governance.

RECOMMENDATIONS

On collaboration of communities, the study recommends that the county government should adopt an effective stakeholder mobilization strategy that help build collaborations with other health sector players like NGO's, CBOs and private companies for the realization of health goals in Kenya through devolved units.

Based on the present findings and analysis, the study recommends an enforcement of Kenya's Health Policy 2011–2030 and the 2010 Constitution of Kenya both of which require an appropriate and equitable distribution of health workforce in public health facilities and their subsequent training and development, enhancing their retention packages and incentives and upgrading of institutional and health worker productivity and performance.

It further recommends that the county government with the help other central government agencies and the ministry of health should put in place measures that would ensure health grants from international governments are utilized for the implementation of intended health care projects. Further, the county government with the help of anti-corruption agencies should combat corruption to ensure revenue from local taxation is appropriately utilized to implement health care projects for the provision of health care services at the county level. The county government should also encourage benchmarking trips amongst the implementers of the health care project and further enhance performance evaluations and appraisals to motivate its employees.

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