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DRIVERS OF HEALTH SERVICES' SUSTAINABILITY IN MISSION HOSPITALS A CASE STUDY OF MERU, MURANG'A, NYERI, KIRINYAGA AND EMBU COUNTIES

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Abstract

The study was conducted to explore drivers of health services' sustainability in mission hospitals in Kenya so as to enhance service provision, accountability and growth while embracing best practices. The study was carried out in 10 faith based hospitals in Kirinyaga, Murang'a, Embu, Nyeri and Meru counties with bed capacity of 60 and above. A multivariate regression model was applied to determine the relative importance of each of the three variables with respect to health services' sustainability; with an established equation of $Y=0.260+0.512x_1+0.170x_2+0.051x_3$ showing that if quality improvement system practices, governance structures and stakeholder's engagement are all rated as zero, health services sustainability would be 0.260. The study found out that mission hospital adheres to quality improvement practices such as presence of quality improvement teams and standard operating procedures but lacks top management support. Study also indicated that stakeholder's engagement was a key drive to sustainability but there was little engagement within the catchment population. The study concluded that mission hospitals lack sufficient funds from their sources of income to sustain quality health services since main source of funds is user fee which is also affected by dwindling patient numbers**.** The study recommends that governance of mission hospitals should be strengthened and professionalized to ensure that it has the essential competence and mix of skills and employees trained on sustainable procurement concept. It is recommended to further research on how mission hospitals can gain competitive advantage through service differentiation.

Keywords: *Health Services Sustainability, Mission Hospitals, Kenya Catholic Secretariat*

1. Introduction

Mission hospitals were initiated by missionaries and were heavily subsidized. The situation has changed; donor support is no longer reliable and cost of providing services has increased tremendously. The subsidy which enabled the services to be cheap and accessible has largely ceased hence the full cost of delivering services has to be met by the patients. Bandri (1994) noted that the health providers market has also become very competitive with private and public health units mushrooming in both urban and rural areas. The management of mission hospitals is plagued by inadequate resources and weak health systems to inform decision making process. A number of mission hospitals are befallen by crisis due to weak governance structures leading to poor oversight of health institutions (Kenya Episcopal conference, report 2010).

The churches health facilities have very unique role in health service delivery worldwide. The services are provided as part of holistic evangelization mission of the church following the commission of Christ to go out to the world to make disciples through teaching, preaching and healing "Mathew 10:7-8". Motivated by the foundation provided by Christ, they provide a wide range of comprehensive care services in remote hard to reach districts of Kenya (Asante, 2007).

The missionaries who brought the Gospel of Christ to Africa were indeed faithful to this call. Despite many challenges of culture, illiteracy, fatal diseases and limited resources; they endured and established centers of education, healthcare, and evangelism. This approach has given church health services a special holistic package which addresses the physical, psychological and the spiritual human needs.

In Africa, a large proportion of health services are provided by the church. This ranges from 20-40% of the total health care but becomes even higher in the rural areas of the continent. Unfortunately this contribution is facing challenges due to various factors and is recording a downward trend (CHAK, 2011).

In Kenya, a recent study conducted jointly by the MOH, CHAK, and KEC indicate that the contribution of churches in healthcare has dropped from 40% to about 30% of the total health care. To date, churches in Kenya run 1000 health facilities while the government operates 2,300 health facilities (Manyuru, 2008).

2. Statement of the Problem

High rate of closure and downward trend of mission hospitals is worrying. Between 1908 and 1979, 302 hospitals were started. From 1980 to 1995, 22 were started.1996 to date only one mission hospital has been started. The closure rate of these facilities started way back in 1988 and as a result, around 20 mission hospitals have been closed. (CHAK, 2011)

It has been observed that 50% of church based health facilities are financially unsustainable, 40% are just surviving and occasionally breaking even, while only 10% are doing well (Mwangi, 2007). A recent study conducted jointly by the MOH, CHAK, and KEC indicate that the contribution of churches in healthcare has dropped from 40% to about 30% of the total health care. The situation therefore threatens the achievement of millennium development goals.

The researcher is compelled to describe continuous quality improvement, governance as well as stakeholder's engagement and the effects of these factors on sustainability. There is no study that has been done on church owned hospitals in Mt Kenya region.

3. Objectives of the Study

The study's broad objective was to explore the drivers of health services' sustainability in mission hospitals. This objective was established through the following specific objectives;

i. To assess how continuous quality improvement system practices influence sustainability of mission hospitals
ii. To determine how best governance structures in mission hospitals affect sustainability
iii. To examine how stakeholder's engagement in mission hospitals influence health services' sustainability
iv. To establish the relationship between drivers of health services and sustainability of mission hospitals

Research questions for this study were based on these objectives.

These objectives have been summarized in form of a conceptual framework as displayed in the following figure.

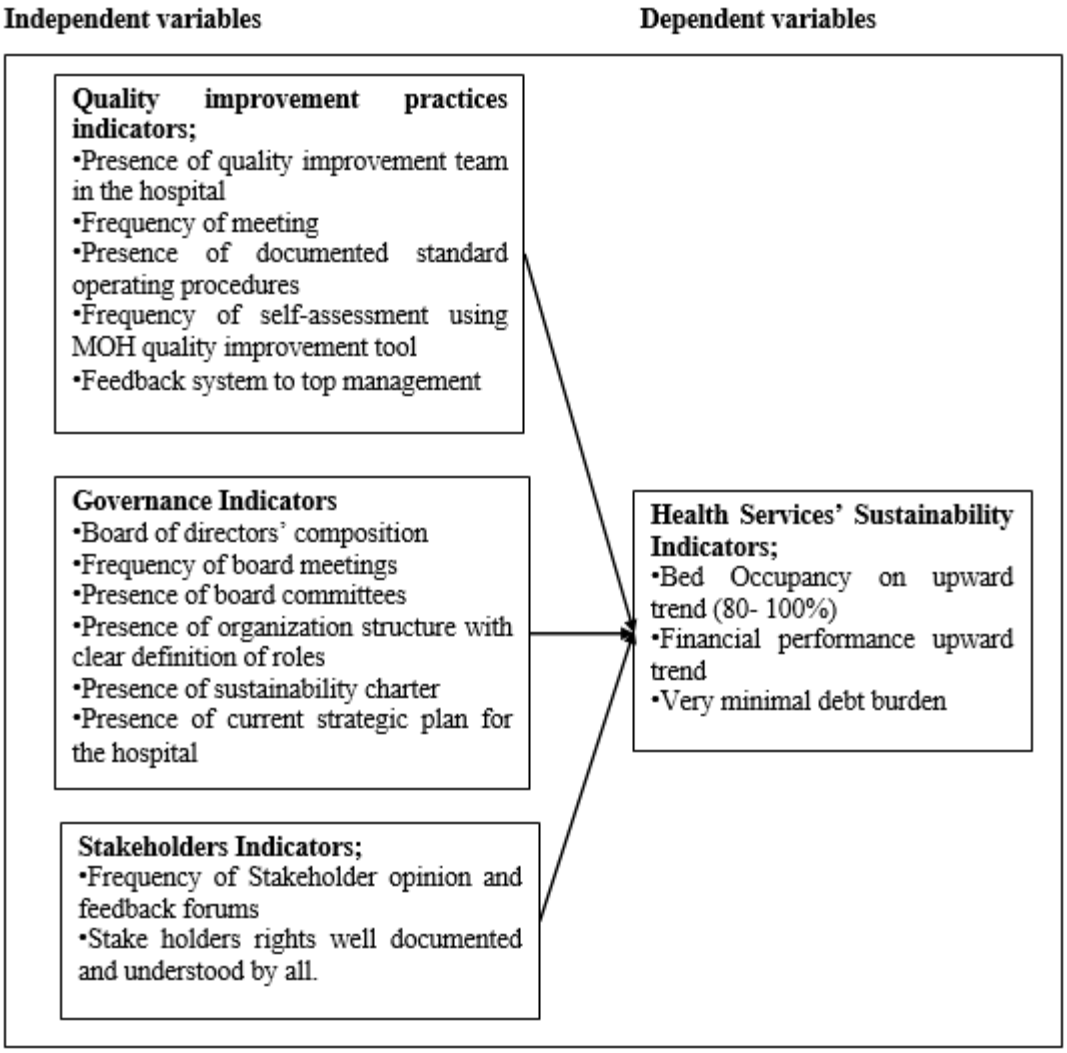

Figure 1: Conceptual framework

4. Justification of the Study

The study will generate new knowledge that helped reverse the downward trend of mission hospitals and contribute positively to the health systems department through its in-depth study on the practicability of the health service delivery pillar in strengthening health systems.

With the Church being a dependable partner of the government and shares in its vision to reach to all Kenyans with quality and affordable health services, knowledge on the role of quality management, governance and stakeholder relationship on sustainability will be enhanced.

The information generated in this study will be of importance to; other similar institutions operating under similar circumstances, top management in the church for planning of health services in the province served and development partners in health, donor community for their budgeting, the National Hospital Insurance Fund for setting the rebates and accreditation, Church

Health Institutions in Kenya for capacity building and Hospital management for preparing budget.

5. Research Methodology

The researcher adopted a descriptive-cross sectional research design by describing the drivers of health services sustainability in mission hospitals, measuring them in numerical scale to produce data that reflected the frequency with which they occur in mission hospitals. This design explained why mission hospitals are diminishing and the efforts in place for future sustainability.

The research concentrated on 10 tier three mission hospitals in five counties (Meru, Murang'a, Kiriyaga, Nyeri and Embu) in Mt Kenya region. These are Mt Kenya Hospital- Kirinyaga Our Lady of Lourdes Mwea Hospital - Kirinyaga, P. C. E. A Tumutumu Hospital - Nyeri, Consolata Hospital - Nyeri, Mary Immaculate Hospital -Nyeri, Maua Methodist Hospital - Meru, P C E A Chogoria Hospital- Meru Consolata hospital – Embu, Kiriaini Hospital – Murang'a and Consolata Hospital – Nkubu Meru. These hospitals run under the doctrines of the church ranging from the Catholics, Presbyterians, Protestants and the larger reformed church such as the African Inland Church. All these targeted hospitals have a bed capacity of 60 and above. All are in the rural settings, general income of the population is leveled at the same average earnings and management levels are the same from the top corporate management to the operational levels. All have active boards of management and running them with a member ship of 5 to 13 members.

From each hospital respondents were categorized to the board chairman, the hospital chief executive officer, the nursing officer in charge, the hospital finance manager, the chair of quality improvement team, hospital public relations officer out of which a sample size of 10 respondents from each category was obtained, totaling to 60 respondents. Data was collected using a semi-structured questionnaire and analysed using SPSS.

6. Results and Discussion

A study on background information reveals that 69.6% of the mission hospitals in review have been in existence and operational for over 20 years while only 7.1% have been in existence for less than 5 years.

26.09% have a 101-150 bed capacity, 32.61% have a 151-200 bed capacity, 13.04% have a 201-250 bed capacity while only 2.17% have a bed capacity of less than 50 beds.

52% of the mission hospitals have a 40-60% daily bed occupancy, 9% have a 60-99% daily bed occupancy while 5% have a 100% bed occupancy. 34% of the hospitals have a below 40% daily

bed occupancy. This translates to mean that majority of the mission hospitals have above 52 % daily bed occupancy.

7. Quality Improvement Practices

The aim of this objective was to measure the quality aspects practiced to make the health services better and sustainable. The respondents to this section of the questionnaire were the senior nursing officers of the hospital and the quality improvement members. This objective has been addressed through assessing; Presence of Quality Improvement Team, Frequency of meetings for QIT, Presence of standard operating procedures (SOPS) in departments, Hospital compliance with quality improvement standards.

7.1 Presence of Quality Improvement Team

Respondents were required to indicate whether there is quality improvement team (QIT) in their respective hospitals. The study found out that, majority had agreed with the statement and are represented by 65%. Only 35% of the respondent denied that there is QIT in the hospitals. This implies that there are efforts in most hospitals to continuously improve quality of health services leading to reduced medical errors, increased patient safety and improved worker outcomes. This concurred with other studies by wiles and Robinson (1994) that found that the quality of teamwork in healthcare is related to patient mortality in hospitals, more streamlined and cost effective patient care, reduced physician visits and hospitalization rates, lower staff absenteeism and turnover, more effective use of resources and greater patient satisfaction.

7.2 Frequency of meetings for QIT

The study found out 44% of the respondents indicated that meetings are held monthly, 39% two months, 11% quarterly a year while 6% have indicated that it's held twice a year. This indicates that with management support the QIT can influence change associated with systems positively. This is in relation to west (2003), who indicated that whatever changes are occurring in healthcare systems both nationally and internationally, it is important to reflect on why effective healthcare teams are so important in health service delivery, and how team processes can be improved to ensure they are delivering high quality and safe patient care. Results have been displayed in figure 2 below.

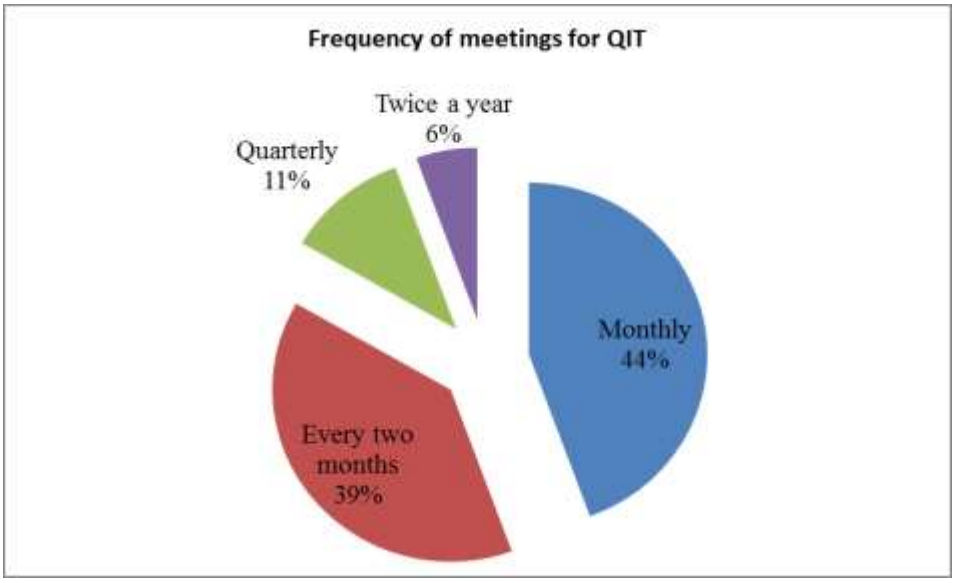

Figure 2: Frequency of meeting for quality improvement team

7.3 Presence of Standard Operating Procedures (SOPS) in departments

SOPs are written instructions intended to document how to perform a routine activity. Health institutions like other companies rely on standard operating procedures to help ensure consistency and quality in health service delivery.

The study found out that, majority of the respondents 55.6% agreed that there are (SOPS) in departments. Those who denied represented the remaining 44.4%. This implies that there are continuous quality improvement practices in some mission hospitals to guide staffs' operations while others do not have. This concurred with Berwick et al (2002) who indicated that it is important to adopt various process-improvement techniques to identify inefficiencies, ineffective care, and preventable errors to then influence changes associated with systems.

7.4 SOPS Reviewal

In relation to presence of SOPs, the researchers sought to find the rate of review done on the SOPs. The response was acquired from 55.6% of the respondents who indicated presence of SOPs in their hospital.

Majority of the respondents 61.9% indicated that SOPs are reviewed after six months to one year period. 28.6% of respondent have indicated less than six months while those who mentioned more than one year ago were represented by 9.5%. This is in relation with Laschinger & Leiter (2006) literature which he mentioned that, staff are likely to exert more influence over the use of standard processes, teamwork and the degree to which there is a culture of improvement, all of which are factors influencing patient outcome.

7.5 Hospital compliance with quality improvement standards

Table 1: compliance with quality improvement standards

Factors Under Consideration	Mean Score	Standard deviation
Hospital provides services that meet the needs of patients	4.3	0.0212
There are quality improvement teams	3.6	0.0123
The Hospital has set up standard operating procedures	3.9	0.0421
Hospital organizes frequent meeting to review best practices and obsolesce old and ineffective ones	3.5	0.0321
Hospital conducts self-assessment using the ministry of health quality improvement assessment tool.	3.8	0.1242
There is feedback system to top management	4.1	0.3213
There is a culture that fosters safety and quality	4.3	0.4322

According to table 1 above, the study found out that majority of the respondents agreed to a high extent that the hospital provides services that meet the needs of patients and also that there is a culture that fosters safety and quality with a mean score of 4.3. Second in the table was a group of respondents who indicated that the Hospital has set up standard operating procedures with a mean score of 3.9. Hospital conducts self-assessment using the ministry of health quality improvement assessment tool was equally agreed to a medium extent with a mean score of 3.8 in the third position. Some of the respondents also pointed out that there are quality improvement teams, this factor with a mean score of 3.6. Lastly according to the questionnaires the hospital organizes frequent meeting to review best practices and obsolesce old and ineffective ones, closing with a mean score of 3.5. This is in line with Juran (1986) who mentioned the premise of Continuous Quality Improvement (CQI) is based on a system that encourages entire organizations to refocus resources and implement a continuous improvement process to meet and exceed customer needs efficiently and effectively. Juran (1986) also mentioned the premise of TQM in health care is based on a system that encourages entire organizations to refocus resources and implement a continuous improvement process to meet and exceed customer needs efficiently and effectively.

8. Governance Structure

Governance structures are designed to promote transparency, to facilitate collaboration with members and consultation with stakeholders, and to ensure the effective operations of the organization. This variable has been determined through establishing; Presence of governance policy, Governing body in the institution, the frequency of board/committee meeting,

Board/committee's contribution towards institutional sustainability, Presence of governance structure/organogram, Approach employed by the Hospital management in communication, The hospital's engagement in the purchase of resources, and Stewardship, transparency and accountability within the hospital.

8.1 Presence of governance policy

The study found out that, majority (95%) agreed that there are governance while only one respondent disagreed with the rest representing 5%. This implies that mission hospitals have governance policy in place. However most respondents noted that these are policies documents distributed to health facilities as guide from Christian health association of Kenya (CHAK) and KCCB- catholic health commission. Most hospitals have not scaled down to formulate a policy document specific for their hospital. This is in line with WHO (2007), who indicated that Health organizations of developing countries have chosen not to focus on the stewardship for a number of reasons, including a negative perception and the lack of a simple interface to engage the fragmented and disorganized landscape of informally- and formally-trained, and publicly- and privately-financed health care.

8.2 Governing body in the institution

The study found out that, Majority (75%) of the respondents indicated the hospital board of directors the remaining 25% of the respondents indicated advisory committee while none of them indicated that the governing body involved the facility management team. This is in line with USAID (2008) that indicated that Performance of a health system is more effective when there is strong governance and effective institutions.

8.3 Frequency of board meetings

The study found out that, majority (45%) meet four times a year, closely followed by three times a year with a representation of 40%. Only 15% of the respondents indicated that the meetings are held twice a year while none of the respondents mentioned of the meeting being held once a year. This is in relation with Acheson (2008), stakeholder engagement provides opportunities to further align business practices with societal needs and expectations, helping to drive long-term sustainability and shareholder value.

8.4 Board/committee's contribution towards institutional Sustainability

The study established that, there was a tie between respondents who rated the allegation unsatisfactory and satisfactory each represented with 48%. A few of the respondents indicated to be very good while none mentioned to be excellent both represented with 4% and 0% respectively. This implies that boards contribute just fairly towards sustainability despite their

quarterly meeting. This is in line with Emsile (2007) who noted that Key challenges to governance in developing countries' mixed health systems include: a weak infrastructure for gathering information about providers and other stakeholders in fragmented health systems; inadequate regulation of providers and care quality and limited opportunities for public-private collaboration and underdeveloped policy consultation and policy analysis mechanisms.

8.5 Presence of governance structure/organogram

Respondents were asked to indicate if there is governance structure/organogram in place. The study found out that, majority (65%) of the respondents denied that governance structure exist in the hospital. while 35% agreed. This implies that roles of various levels of management are not clear in most hospitals which could lead to conflict of roles and confusion at the operational level.

8.6 Approach employed by the Hospital management in communication

Respondents were asked to indicate the approach employed by the Hospital management in communication. The study found out that, majority (65%) have pointed out mixed mode approach mostly employed, closely followed by those who indicated the top down approach with a representation of 35%. There were no respondents who indicated to the bottom up approach as an employed strategy. This tallies with Laschinger & Leiter (2006) who indicates that engagement improves performance in part because engaged staff are more likely to put energy into interactions with clients, while their positive approach may in turn motivate other staff, thereby creating a more engaged workplace.

8.7 The Hospital engagement in the purchase of resources

A total of twenty respondents were asked to answer the question pertaining the purchase of resources for the hospitals considering some key factors on procurement.

Table 2: The Hospital engagement in the purchase of resources

Factors to consider	**Mean**	**Std. Deviation**
The hospital has procurement policy in place	1.45	0.5104
Competitive bidding from known suppliers	1.35	0.48936
Purchase is influenced by local Leaders	1.90	0.30779
No procedures being followed in purchase	1.60	0.50262
Purchase is politically influenced	1.80	0.41039

The study found out that procurement policy is in place in some of the hospitals with a mean score of 1.450, On Competitive buying from known suppliers, some respondents also agreed with a mean score of 1.350. When asked if the purchase is influenced by local Leaders, the presence of procedures being followed in purchase and if the Purchase is politically influenced, some respondents disagreed with a mean score of 1.9, 1.6 and 1.8 respectively. There are few hospitals that have procurement policies in place. This finding therefore is in relation with Coulter (2012) who noted that engaging across the system is the best way to ensure that health care organizations are sustainable because it helps deliver the right care strengthens patients' ability to manage long-term conditions and improves outcomes.

8.8 Stewardship, transparency and accountability within the Hospital

The researcher asked respondents to indicate the extent to which stewardship, transparency and accountability are observed within the Hospital.

Table 3: Stewardship, transparency and accountability within the Hospital

Factor to consider	N	Mean	Std. Deviation
There is strong institutional framework to ensure sustainability	19	2.68	0.74927
There is clear policy guidelines guiding Hospital management and operations	19	2.79	1.03166
Hospital management is delinked from politics whether from church or outside	20	3.70	0.86450
There is equity and fairness in Hospital management	20	3.35	1.08942
The Hospital only employs competent staff	20	3.60	0.82078
The Hospital is managed by competent, transparent and accountable people	20	3.25	0.91047
There is availability of resources human, financial, physical, and information for providing care	20	2.40	0.75394
The hospital has sustainability charter	20	2.10	0.30779
The hospital has strategic plan and annual operation plans in place	19	3.21	1.08418

The study found out that factors like the hospital management are delinked from politics especially from outside, employs competent staff, that there is equity and fairness in hospital management , the hospital is managed by competent, transparent and accountable people and

finally the hospital has strategic plan and annual operation plans in place. All this factors were agreed to a moderate extent with a mean score of 3.70, 3.60, 3.35, 3.25 and 3.21 respectively. The study also found out that, respondents agreed to a little extent on the following factors: there is clear policy guidelines guiding hospital management and operations, there is strong institutional framework to ensure sustainability, there is availability of resources human, financial, physical, and information for providing care and finally the hospital has sustainability charter with a mean score of 2.79, 2.68, 2.40 and 2.10 respectively. This implies that most hospitals do not have sustainability charters while only few have resources to run the hospital.

9. Stakeholders Engagement

Stakeholder engagement is the process by which an organization involves people who may be affected by the decisions it makes or can influence the implementation of its decisions. This objective has been established through the following indicators; Level of external stakeholders' engagement at the hospital, the extent of engagement, frequency of hospital organizing stakeholder opinion and feedback forums, Sustainability improvement at the hospital.

Table 4: Stakeholders Engagement

Factors Under Consideration	**Mean Score**	**Standard deviation**
Surrounding community	3.9	0.0251
Customers/Patients	4.1	0.1254
Board Members	3.5	0.8751
The Church	4.1	0.0214
Employees	4.1	0.0447
The Government	3.2	0.0121
Suppliers	3.7	0.0122
Other Hospitals	4.1	0.0635

The study found out that, the Church, Employees and other Hospitals are key stakeholders with a mean score of 4.1. The surrounding community came in second with a mean score of 3.9 while suppliers were third with a mean score of 3.7 while others considered board members as stakeholders with a mean score of 3.5. This implies that catchment population who should be the first beneficiaries is not given first priority as stakeholders while government is rated lowest in terms of engagement. The finding corresponds with Emslie (2007) who indicated that

Interactions and communications with the environment help the organization to deal with changes and to adapt accordingly. Many organizations have found out that being concerned about the eco-sphere helps them to keep their employees motivated, makes the organization more effective and enriches shareholders.

9.1 Level of external stakeholders' engagement at the hospital

Respondents were asked to indicate the level of external stakeholders' engagement in any project implementation in the hospital. The study found out that, stakeholders are engaged more during the planning stage 47.3% and to a lower extent at implementation stage with 31.6%. During monitoring, they are hardly involved 10.5%. Previous studies showed that that organizations whose boards focus on strategy and governance perform better, while boards that engage staff in decision-making raise staff satisfaction.

The respondents were further asked to rate the extent of engagement considering some factors as indicated below.

Table 5: the extent of engagement

Factors Under Consideration	**Mean Score**	**Standard deviation**
The Hospital conducts customer satisfaction survey	3.2	0.0125
Internal audits and surveys are conducted regularly	3.1	0.0351
The Hospital's objectives are aligned to customer and community needs	3.5	0.0781
Various media of communication are used to reach out to various stakeholders	2.8	0.0421
Open days are scheduled regularly to interact with Stakeholders	3.2	0.0352
The Hospital's employees understand the its strategic plans and are given enough authority to make decisions	3.7	0.0584
Both employees and customers feel valued by the Hospital	3.6	0.0572
The Hospital provides training and professional development for their employees	4.2	0.0214
Stakeholders rights are well documented and understood by all	2.5	0.2142

The study found that the extent to which external stakeholder's are engaged low 2.5 as compared to internal stakeholder (employees) 4.2. Many Mission hospitals do not use media to communicate to its stakeholders 2.8. Employees are given authority to make decision though

some noted that only those at the top level management, open days are held with a mean score 3.6 . To some extent hospitals objectives are aligned to customer and community needs while others indicated that customer needs are not considered in some hospitals.

9.2 Frequency of Hospital organizing stakeholder opinion and feedback forums

Respondents were asked to indicate the frequency of Hospital organizing stakeholder opinion and feedback forums. The study found out that, majority (45%) have indicated the frequency to be annually, 30% of the respondents came in second indicating that there is no frequency in stakeholder opinion. 25% of the respondents jotted out that the feedback is obtained quarterly, surprisingly none of them have indicated that the stakeholder opinion and feedback forums is conducted on a monthly basis. The findings are in line with Shandler and Egan (1994) who indicated that Success in driving both quality and efficiency demands new levels of co-operation and partnership-working across systems, notably between hospital and community services and between health and social care. Leadership across systems requires an ability to understand and work with different goals, cultures and business priorities from those of your own organization.

9.3 Sustainability improvement at the hospital

Respondents were asked to suggest what can be done to improve sustainability of their hospitals. Many commented that the level of stakeholder's engagement should be improved since engagement was skewed to church leaders affiliated to the hospital while the customer was not involved .others noted that customer survey needs to be enhanced. Many suggested that, it is necessary to establish a quality assurance department in the hospitals that oversee the timeliness and efficiency of hospital services as well as quality of medicine supplies and consumables. Mission hospitals need to develop a culture of continuous quality improvement while good governance will lead to effective oversight of the hospitals thus making a positive change towards sustainability. A time has come for the church to involve all stakeholders in health care services delivery; they should be engaged in key decision making through occasional feedback forums held at least two times a year.

10. Sustainability of Health Services

Respondents were asked to indicate the extent to which they consider the healthcare facility sustainable. The study found out that majority jotted out to a little extent with 45%. In the second position was a group of respondents who indicated to a moderated extent with 29%. 14% percent indicated that their facilities are not sustainable at all. Those who indicated that the facility was sustainable to a high extent were represented by 8%. Only 4% indicated that the sustainability of healthcare facility was a very high extent. This implies that health services sustainability in

mission hospitals is threatened. The results concurred with Mwangi (2007) who observed that 50% of church based health facilities are financially unsustainable, 40% are just surviving and occasionally breaking even, while only 10% are doing well.

10.1 Factor Affecting Healthcare Services Sustainability

The researcher asked the respondent's to indicate the factor affecting healthcare services sustainability. From the questionnaire, majority of the respondent have indicated that the major factor was stakeholder engagement represented by 34.48%. Those who indicated high debt burden came in second with 27.59% while quality issues came in third with 20.69%. Governance issues came in fourth with 17.24%. This implies that stakeholder's engagement plays a key role in sustaining health services in mission hospitals while high debt burden could be due to development projects. The findings are aligned to the situational analysis study of Faith Based Health Services vis-à-vis Government Health Services conducted in 2007 which revealed weaknesses in the Health Systems of Faith Based Health facilities in Kenya which affect service quality, utilization, efficiency, sustainability, monitoring and evaluation.

10.2 Performance Level

Respondents were asked to indicate the performance of facility in terms of patient numbers. The study found out that, majority of the respondents has indicated the performance to be fairly good with 56%. In the second position was a group of respondents who indicated the performance level to be poor represented by 33%. Only 9% have seen it to be very good while 2% have jotted it out to be excellent. This implies that mission hospitals has the capacity to handle more patients thus use economies of scale to sustain the hospitals which are clearly underutilized. This finding was in relation with Coulter (2012), greater patient engagement is the best way to ensure that health care organizations are sustainable because it helps deliver the right care, strengthens patients' ability to manage long-term conditions and improves outcomes.

10.3 Source of Finance

The researcher required the respondents to indicate the source of finance at the organization. From the questionnaires filled, 93% of the respondents indicated user fees as the source of capital. Those respondents who mentioned the source as donors were second represented by 4%. Income generating projects was the third in the chart with 3%. Surprisingly there was no capital that originated from government sponsors. This implies that most of the problems have originated from lack of finances since the main source is user fees yet the client base is low. The County and National governments through the ministry of health have the key responsibility of

taking care of health needs of the citizens but are not supportive to mission hospitals who are their partners in healthcare delivery.

10.4 Sufficient Funds

Respondents were further required to mention if the funds they received from whichever source were sufficient. The study found out that majority of the respondent does not get adequate finances to run the hospitals represented by 90.9%. Only 9.1% have agreed that the money received is enough. This implies that money received from user fee is not enough to purchase the necessary facilities needed for day to day operations in the hospitals. This is in line with Joan (2007) study who noted that the operating situation has completely changed while the cost of providing healthcare has increased tremendously; the volunteer missionaries are very few and external support of funds and medical supplies has reduced significantly and are no longer reliable.

10.5 Effective Efforts in Overcoming Sustainability Challenge

Table 6: Effective Efforts in Overcoming Sustainability Challenge

Factor to consider	**Frequency**	**Percent**
Improving governance in healthcare facilities	16	28.57
Engaging all stakeholders	28	56.00
Embarking on total quality management	10	17.86
Educate community on the NHIF	2	3.57
Total	**56**	**100.00**

The repondents were asked to indicate effective efforts to overcoming sustainabilty challenge. The study found out that 28 respondents indicated that engaging all stakeholders is an effective effort in overcoming sustainability challenge representing 56%. Second in the table were 16 respondents who suggested that the effort to be implemented was improving governance in healthcare facilities representing 28.57% 10 respondents have pointed out that embarking on total quality management represented by 17.86%. Only two respondents have indicated that, educate community on the NHIF should be the best effort representing 3.75%. This clearly indicates there is a managerial problem hindering the operation in the mission hospitals ranging from the government support to hospital management where stakeholders and governance issues plays a key role in services sustainability.

11. The relationship between drivers of health services and sustainability of mission hospitals

A multivariate regression model was applied to determine the relative importance of each of the three variables with respect to Health Services' Sustainability.

The regression model was as follows:

$Y=\beta o+X_1\beta_1 +X_2\beta_2+X_3\beta_3+ \varepsilon$

Where:

Y= Health Services' Sustainability

X^1= Quality improvement system practices

X^2= Governance structures

X^3= Stakeholder's engagement

βo = constant (y intercept)

β = coefficient

ε = error term

12. Regression Analysis

Analysis in table 7 below shows that the coefficient of determination (the percentage variation in the dependent variable being explained by the changes in the independent variables) R^2 equals 0.843, that is, Quality improvement system practices, Stakeholder's engagement and Governance structures, leaving only 15.7 percent unexplained. The P- value of 0.000 (Less than 0.05) implies that the model of health services' sustainability is significant at the 5 percent significance.

Table 7: Model Summary

					Change Statistics				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.918(a)	.843	.805	.51038	.843	1.242	4	52	.000

Predictors: (Constant), Quality improvement system practices, Governance structures, Stakeholder's engagement,

Dependent Variable: Health services' sustainability

Table 8: ANOVA

	Sum of Squares	df	Mean Square	F	Sig.

Regression	.852	4	.213	1.242	.000
Residual	20.35	52	.171		
Total	22.64	56			

Predictors: (Constant) Quality improvement system practices, Governance structures, Stakeholder's engagement,

Dependent Variable: Health services' sustainability.

ANOVA findings (P- value of 0.00) in table 8 shows that there is correlation between the predictors variables (Quality improvement system practices, Governance structures and stakeholder's engagement) and response variable (Health services' sustainability)

Table 9: Coefficients of regression equation

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
(Constant)		.260	.460		0.565	.231
Quality improvement system practices	X_1	.512	.048	.254	2.729	.001
Governance structures	X_2	.170	.045	-.300	3.778	.000
Stakeholder's engagement	X_3	.051	.023	.113	2.217	.002

Dependent Variable: Health services' sustainability

The established multiple linear regression equation becomes:

$Y = 0.260 + 0.512X_1 + 0.170X_2 + 0.051X_3$

Where

Constant = 0.260, shows that if Quality improvement system practices, Governance structures and stakeholder's engagement are all rated as zero, Health services' sustainability would be 0.260

X_1= 0.512, shows that one unit change in Quality improvement system practices results in 0.512 units increase in Health services' sustainability

X_2= 0.170, shows that one unit change in Governance structures results in 0.170 units increase in Health services' sustainability

X_3= 0.051, shows that one unit change in Stakeholder's engagement results in 0.051 units increase in Health services' sustainability

Chi squares

Table 10: Chi-Square test results on drivers of health services' sustainability in mission hospitals

Chi-Square Tests			
	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	38.322	9	.001
Likelihood Ratio	39.175	9	.000
Linear-by-Linear Association	10.517	1	.001
N of Valid Cases	300		

The results as indicated in table 10 above shows that the chi-squared test statistic is 38.322 with an associated *p* of 0.001. In this case, since $p < 0.05$ which is greater than the constant p of 0.001, therefore the null hypothesis is rejected that there is no relationship between Health services' sustainability in mission hospitals; had the coefficient of regression of Quality improvement system practices, Governance structures and stakeholder's engagement were rated above zero, and then alternative hypothesis would be accepted. Thus, there is a statistically significant relationship between the drivers of Health services' and sustainability of mission hospitals.

13. Summary of the findings

The first objective was to assess how continuous quality improvement system practices influence sustainability of mission hospitals. The study found out that quality improvement was fairly practiced in the hospitals. This helps determine the effects of health care on desired outcomes and to assess the degree to which health care adheres to processes based on scientific evidence or agreed to by professional consensus and is consistent with patient preferences. However 44.4% do not have standard operating procedures while feedback system to top management yielded less fruits thus demoralizing the quality improvement team. It is important to adopt various process-improvement techniques to identify inefficiencies, ineffective care, and preventable errors to then influence changes associated with systems.

The second objective was to determine how good governance structures in mission hospitals affect sustainability. The study found out most hospitals has a board of directors but lacks a clear documented organization structure (organogram) while board composition was biased to church leaders. Sustainability charter was missing in almost all the hospitals. The study confirms that organizations whose boards focus on strategy and governance perform better, while boards that engage staff in decision-making raise staff satisfaction as well as focusing on the health of

patients. Boards that care about staff wellbeing will treat staff with the same respect accorded to patients.

The third objective was to examine how stakeholder's engagements in mission hospitals influence health services' sustainability. The study found out that, stakeholder's engagement provides opportunities to further align the hospital business practices with societal needs and expectations, helping to drive long-term sustainability and shareholder value. Most respondents indicated that stakeholder's engagement was a key drive to sustainability but there was little engagement within the catchment population stake holders forums were not formal since this was noted to be taking place during church services.

14. Conclusions

The first objective assess how continuous quality improvement system practices influence sustainability of mission hospitals; the study concluded that Mission hospitals adheres to quality improvement practices such as presence of quality improvement teams that meet monthly 44% and presence of Standard operating procedures which are useful tools to communicate important institutional policies, government regulations, and best practices; But also noted that the team lacks management support while SOPs are not reviewed regularly despite frequent changes in technology and medical practice. It is necessary to establish a quality assurance department in the hospitals that oversee the timeliness and efficiency of hospital services as well as quality of medicine supplies and consumables

The second objective was to determine how good governance structures in mission hospitals affect sustainability. The study concluded that mission hospitals have governing policies, they are run by board of directors who meet quarterly but the board composition is skewed to church leaders and also hospitals do not have documented organization structure. The board contributes only fairly to sustainability of hospital as indicated by 48% of respondents. There is weak governance structure leading to poor oversight of mission hospitals. A governing body made up of religious experts, professional technocrats and government representatives should be instituted in the hospitals. This leads to enhanced formalized and open management structures and systems. Engage professionalism in management of mission hospitals and establish clear governance policies and structures.

The third objective was to examine how stakeholder's engagement in mission hospitals influences health services' sustainability. The study concluded that the church, employees and other hospitals are most important stakeholders in mission hospitals giving less priority to the

surrounding community. The level of stakeholder's engagement is very low, opinion and feedback forums are held once a year.

On overall, the study concluded that Sustainability of health services' in mission hospital remains a major challenge. The key drivers to health services sustainability in order of priority are stakeholder's engagement 34.48%, debt burden 27.59%, quality improvement practices 20.69% and good governance 17.24%. The study concluded that, mission hospitals lack sufficient funds from their sources of income to sustain quality health services since main source of funds is user fee 93.7% which is also affected by dwindling patient numbers.

15. Recommendations

1. Hospitals should encourage a culture of total quality management in the hospitals to enhance top management support in quality improvement practices

2. Governance of mission hospitals should be strengthened and professionalized to ensure that it has the essential competence and Mix of skills; this will address other factors such as staff retention, costing of services and reverse of downward trend of patient numbers.

3. Opinion and feedback forums should be held at least twice a year and hospitals should be keen to involve all the stakeholders and Employees should be trained on sustainable procurement concept,

16. Further Studies

Mission hospitals faced no significant competition, because they were located in remote areas with no alternative healthcare providers; currently, the situation has changed whereby private, public and other church institutions have come up in these areas, creating an environment of competition. Mission hospitals therefore need to differentiate their services to remain competitive. They too like any other organization have a challenge of matching consumer preferences, providing quality service, managing productivity, controlling costs and by so doing capturing and maintaining their customers. They depend entirely on the fees they collect from their clients for survival. It is recommended to further research on how mission hospitals can gain competitive advantage through service differentiation. To what extent do healthcare service differentiation strategies contribute to customer satisfaction and loyalty? What challenges do customers face while seeking medical services from these hospitals?

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