

Research in the Quality of Service Delivery in Public Hospitals, Kenya.

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Abstract: *The study reported in this paper purposed to establish the quality of service delivery in public hospitals in Kenya. The study assessed the quality of service delivery to malaria patients in wards for malaria patients in public hospitals. The medical staff and organizational factors were assessed for their role in the quality of service delivery to malaria patients. The study adopted a descriptive survey design. The study location was western region of Kenya (formerly western province). Target population comprised all public hospitals, with a sample size of 127 respondents, which included 31 in- patients and 96 medical staff drawn from 6 public hospitals. Stratified random sampling was the selection method used. The scope of the study focused in-patients suffering from malaria and medical staff on duty in wards for malaria patients involved in the study. Data was collected by use of questionnaires and analyzed using descriptive and inferential statistics. Hypotheses were tested by use of chi-square and multiple regression tools. Findings showed that there exists a relationship between organizational factors and the quality of service delivery.*

(Key words: *Organizational factors, Malaria Patients and Quality of Service delivery*)

I. Introduction

A large section of Kenyan population seeks health care services in public hospitals; The Kenya Health Sector Integrity Study Report (2011). This trend is occasioned by subsidized services in public hospitals (Ministry of Medical Services, 2010) which are cheaper than in private hospitals. Such patients have low income and lack insurance cover for health care, The National Hospital Insurance Fund provides cover to employed patients. The cover accorded unemployed patients is subject to their subscription to NHIF by payment of Kshs 500 monthly (www.kenyabusinessreview.com/892/new-nhif-rates-kenya) which many people cannot afford.

In the dispensation of the new constitution of Kenya (GoK, 2010) management of Public hospitals was devolved thus higher management of these facilities lies with county governments. The aim of this paradigm shift was to improve services in public hospitals. Services under the new management show little improvement from those given in the old dispensation. The scenario observed in public hospitals shows the outpatient overcrowded with patients.

There are also long queues of patients. Such is observed especially at laboratory, pharmacy, Voluntary Counseling and Testing and Antenatal. Overcrowding is equally observed in in-patient wards where patients share beds. Most of the patients suffer from malaria, which is a curable disease but malaria is the leading cause of morbidity and mortality in Kenya (Kenya Malaria Fact Sheet, 2009). Road carnage also contributes to the many patients in wards, especially by motorcycle passenger carriers (JEPAK, 2013).

The lower management of public hospitals has remained the same as it was in the old dispensation. Medical staff in the lower management is not empowered to set their work goals, make decisions and solve problems regarding work processes.

The wards appear small. They also lack basic equipment in service provision to patients, like computers and microscopes. Also in short supply is medical supplies essential for service delivery to patients. The staff works for long hours, an indication that the medical staff is understaffed.

All these factors address the quality of services in public hospitals since delivery of quality service has a significant relationship with customer satisfaction (Swanson and Davis, 2003).

II. Statement of problem

The desired state of public hospitals is that of high quality service to patients. Quality in healthcare may comprise of newer technology, newer and effective medication, and higher staff to patient ratio, affordability, efficiency and effectiveness of service delivery (Tam, 2005). These variables should be realized through quick services to patients in terms of accessibility to prescribed drugs, provision of specialized services in wards; empowerment of medical staff to set work goal, make decisions and solve problems. Medical staff should derive

job satisfaction in their work. There should exist effective client- staff communication as it influences patient satisfaction levels significantly (Pickton and Broderick 2001).

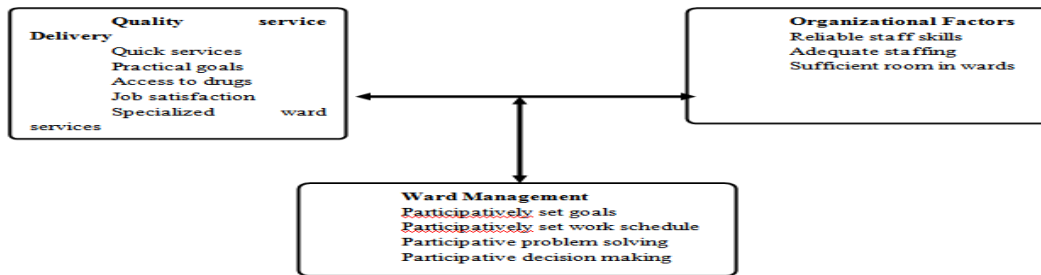
Currently, long queues of patients awaiting services and overcrowding are a common phenomena in public hospitals. Medical staff is not empowered to make decisions and solve problems arising from their work processes. Either, medical staff are not empowered to set their work goals. All these tasks are a preserve of higher management. Thus the study conducted sought to establish the quality of service delivery in the environment thus described.

Purpose and Objectives

The study sought to establish the quality of service delivery in public hospitals.

1. To establish the quality of service delivery to malaria patients.
2. To establish the effect of organizational factors on the quality of healthcare services.

Conceptual Framework



Literature and Research Gap

The International Organization for Standardization (IOS) perceives quality as a relative concept, but if the inherent characteristic of a service meets the requirements of the customer the level of quality is rated as high (Reinartz, 2004). The provision of healthcare to patients in public hospitals is imperative (Ennis and Harrington, 2001) given the influx of patients both in the outpatient and inpatient departments. Quality in healthcare is seen from two perspectives: technical and functional quality (Dean and Lang, 2008). Technical quality concerns medical diagnosis and procedures while functional quality refers to the manner in which the healthcare service is delivered to the patient. Both dimensions of quality are vital in delivering service to patients. The following are identified as determinants of quality of service (Petrick, 2009): competence, courtesy, credibility, security, access, communication, understanding and knowing the customer, tangibles and responsiveness. To facilitate these factors hospitals must implement effective human resource strategies concerning selective hiring and retention of physicians and nurses (Cohen and Levinthal, 2001).

Research on quality of service delivery has been done in Kenya before. One such study was done under the topic: Factors Affecting Provision of Service Quality in the Public Health Sector: A Case of Kenyatta National Hospital (Wanjau *et al*, 2012). The scope of study area was confined to one public hospital. According to this study, Kenya has 4700 public hospitals. One hospital out of this large number may not be representative of the rest. In this study only medical staff is drawn into the study. However, patients are the recipients of the services in hospitals. Their contribution to a study on service delivery should be considered vital. Finally, in the conclusion of the study, it is stated that doctors need to be monitored, which is an age old way of management by top management of organizations and it is out of touch with best practices in human resource management. To this extent, a gap is established that the study on quality of service delivery in public hospitals addresses.

III. Methods and Materials

The study employed the descriptive survey design in three counties. The method was preferred for it ensures complete description of the situation, ensuring minimum bias in data collection and finding out the what, where, and how of a phenomena (Kothari, 2008). The counties were Kakamega, Bungoma, Busia, and Vihiga. Thus Kakamega level 5 and Malava sub-county hospitals were sampled from Kakamega County. Webuye and Bungoma sub-county hospitals were sampled from Bungoma county, Busia sub-county hospital from Busia county and Vihiga from Vihiga County.

The study area comprised the Western region of Kenya. The area is characterized by malaria (Dynamics of Malaria Transmission in Kenya, 2011) and road carnage caused by motorcycle passenger carriers, popularly called boda boda. Further, the study area is characterized by a population that lives below poverty line (Ministry of Medical Services, 2010). A majority of these people seek healthcare services in public hospitals.

Simple and stratified random sampling techniques were used to select a sample study of 200 participants, comprising 100 medical staff and 100 malaria patients, all from the selected hospitals. Data was collected using questionnaires for both medical staff and patients.

Tools were validated for content, construct and face validities using expert help from specialists in the department and piloting done in Kimilili sub district hospital in the same study area. Reliability was determined using the Pearson Product Moment Correlation and Cronbach’s alpha for internal consistency with values 0.85 and 0.89, respectively. Data was analyzed using descriptive frequencies, percentages and inferential statistics including the correlation and multiple regression analysis.

IV. Results

Demographic characteristics

Results obtained from the study indicated that Busia district hospital posted the highest number of medical staff respondents, 45%, while Malava district hospital posted the lowest number of medical staff respondents, 21%. Bungoma district hospital had 34% medical respondents involved in the study. This implied that Malava hospital had a smaller staff. Results further showed that Busia and Malava hospitals both provided an equal and the highest number of patients involved in the study, 36%, while Bungoma posted the lowest number of patient respondents, 29%.The margin between the highest and lowest number of patient respondents was very small, 7%.This implied that all hospitals were well represented by patient respondents.

Findings showed that the male gender involved in the study was 34% while the female was 66%. In addition, findings on the occupation of respondents showed nurses formed the highest number of respondents, 56%, while matrons formed the lowest,10%. Physicians involved in the study formed 16%, while Clinical officers formed 18%. Implication of the findings on occupation revealed that medical respondents of all cadres in a public hospital participated in the study.

Results on the age of respondents in the study showed that the highest number of medical staff involved in the study were between 36-50 years, by 43%, while the lowest age was 20-25, who posted 20%. Participants in the study aged between 26- posted 38%.These findings showed that many of medical staff in public hospitals were elderly people, who had a long experience of working in public hospitals, hence the contribution they made to this study was reliable.

Finally results on the period medical staff had served in the wards for malaria patients showed that 49%, which was the highest number, had served for three months in the malaria wards where they were drawn into the study. The lowest number of months served formed 14%. Medical staff who had served in wards for malaria for 2 and less than 1 month posted 19% each. This implied that a majority of medical staff who participated in the study knew their work environment well enough; hence they provided relevant and reliable information to the study.

Ward management

Table 1.1: Ward management

Ward management	Strongly agree	Agree	Undecided	Disagree	Strongly disagree
Decision making	4%	34%	15%	26%	21%
Problem solving	10%	18%	14%	28%	30%
Designing work schedule	22%	40%	13%	17%	9%

Source: Researcher (2014)

Regarding management of departments and the quality of service delivery, table 1 shows majority of medical staff agreed, (3 8%), that they were involved in decision making and designing their work schedule,(62%). However, the table shows that majority medical staff disagreed, (58%), that they were involved in problem solving.

The chi-square test statistic value (53.892a) and its associated significance value (p=.000 showed that there was a relationship between ward management and quality of service delivery. The null hypothesis was therefore rejected since the test showed that ward management had an impact on the quality of service delivery.

Quality of service delivery

Table 1.2 Quality of service delivery
Quality service delivery.

	Strongly agree	Agree	Undecided	Disagree	Strongly disagree
Availability of drugs	2%	29%	8%	44%	17%
Collection of revenue	33%	25%	2%	29%	10%
Drawing of budget	45%	30%	4%	13%	8%
Purchase of drugs	38%	17%	8%	27%	10%

Source: Research (2014)

According to table 1.2, majority, (61%), medical staff disagreed that drugs were available in the hospitals. Majority medical staff agreed, (58%) that collection of revenue should be done at departmental. A large number of medical staff agreed, (75%) that drawing of departmental budgets should be done at departmental level. Concerning purchase of drugs, majority medical staff indicated, (54%) that drugs should be purchased at departmental level.

Table 1.3 Patients and service delivery
Quality service delivery.

	Strongly agree	Agree	Undecided	Disagree
Bed provision	39%	19%	19%	23%
Bedding service	42%	48%		10%
Basin provision	3%	10%		87%
Utensils service	7%	26%	3%	65%
Toiletry service	3%	42%	23%	32%
Drugs issue	26%	23%	23%	29%
Discharge	10%	10%	16%	65%

Source: Researcher (2014)

Regarding table 1.3 majority of patients agreed that while they were in the wards for malaria patients they were issued with a bed,(58%),bedding, (90%),drugs (49%). Equally, majority of patients disagreed that they were issued with a basin (87%),utensils (65%),toiletry,(55%) and they were not discharged by any medical staff on duty, instead ,when due for discharge, they had to wait for the only medical staff with authority to discharge,(65%).

The chi-square test statistic value (22.108a) and its small significance level ($p = .005$) showed that there was a relationship between organizational factors and achievement quality service delivery. Therefore the null hypothesis was rejected.

Organizational factors

Table 1.4 Organizational factors
Organizational factors

	Strongly agree	Agree	Undecided	Disagree	Strongly disagree
Staff capacity building	1%	29%	33%	18%	20%
Staff- patient ratio		19%	5%	44%	32%
Equipment	7%	20%	6%	20%	47%
Enough room	8%		8%	52%	31%
Staff skills	12%	13%	7%	9%	50%
Staff training	76%	18%	4%	2%	
Increase staff	75%	22%	1%	2%	
Equipped wards	64%	23%	5%	7%	1%
Creation of room	71%	25%	2%	1%	1%

Source: Researcher (2014)

Table 1.4 indicates that majority disagreed, (38%), that medical staff underwent capacity building in the management of malaria. Majority also disagreed, (76%) that medical staffing met patient demand. Similarly, a large number disagreed (, 67%) that equipment like computers and microscopes were available in wards for service delivery. Finally, majority medical staff disagreed, (69%) that they had relevant skills in computer and microscope operation.

Equally, table 1.4 shows that medical staff agreed that there was need to improve medical staff in skills for computers and microscopes,(94%);increase medical staffing,(95%);equip wards for malaria patients with equipment necessary in management of malaria like computers and microscopes and create more room for the wards for malaria patients, (96%).

Tables 1.5, 1.6, and 1.7 show results on the relationship between organizational factors and quality of service delivery.

Variables entered

Table 1.5

Model	Variables entered	Variables removed	Method
1	Organizational factors b		enter

Dependent variable: Quality service delivery
Source: Researcher (2014)

Table Model summary

Model	R	R square	Adjusted square	R	Std. error of the estimate
1	0.207a	0.043	0.033		13.14917

Predictors:(constant)
Organizational factors
Researcher (2014)

Concerning organizational factors, table 1.6 shows that results include information about the quantity of variance that is explained by the predictor variables, organizational factors. In this model, the R value is 0.207a, which indicates that there is a great deal of variance shared by the predictor variables and quality service delivery. The R square value is 0 .034, which indicates that 4.3% of the variance in the dependent variable is explained by the independent variable in the model.

Table 1.6 ANOVA

Model	Sum of squares	df	Mean square	F	Sig.
1 regression	726.089	1 94 95	726.089	4.199	0.0043b
Residual	16252.651		172.901		
total	16978.740				

Dependent variable: quality service delivery
Predictors: (constant) Organizational factors
Source: Researcher (2014)

The statistics as shown in table 1.7 represents a test of the hypothesis whether the R square proportion of variance in the dependent variable accounted for by the predictors is zero. It appears that the predictor variables in the study are not all equal to each other and the large F value (4.199 and a small significant level (0.0043b). This indicates that for quality service delivery, organizational factor have a role to play.

Table 1.7: Coefficient aB

Model	Unstandardized coefficients		Standardized coefficients		t	Sig.
	B	Std. Error	Beta			
(constant)	35.327	6.990	0.207		5.054	0.000
Organizational factors	0.459	0.224			2.049	0.043

a. Dependent variable: Quality service delivery
Source: Researcher (2014)

Table 1.8 provides information about the effects of the variable organizational factors on quality of service delivery. The unstandardized coefficient for organizational factors in this case is 0.459, which indicates that the predictor variable, quality service delivery, will be affected by 0.459. Examining the Beta coefficients for organizational factors, it was noted that these variables were more obviously the better predictors of quality service delivery.

Examining the t statistic for the variable, the associated significance value of 0.043, indicates that the null hypothesis that states that this variable’s regression coefficient is zero when all other predictor coefficients are fixed to zero, can be rejected.

This shows that quality service delivery can be predicted by the variable, organizational factors. Thus it can be concluded that quality service delivery is dependent on organizational factors.

Furthermore, the unstandardized coefficients indicate the increase in the value of dependent variable for each unit increase in the predictor value. In this case, the unstandardized coefficients organizational factors (0.459), indicate that for each of these variables, predicted quality service delivery will increase. Therefore, it was concluded that quality service delivery was dependent on organizational factors. Thus the null hypothesis was rejected.

V. Discussion

This study established the quality of service delivery to malaria patients by seeking the contributions of patients which the previous study (Dr Wanjau *et al.*, 2012) failed to do. This study established that public hospitals did not provide patients with basic yet vital supplies like basins, utensils and toiletry. This was a factor likely to compromise the hygiene standards of patients. The study established that when patients were due for discharge they had to wait for the only medical staff with authority to discharge to make that decision. In the absence of this authority, patients due for discharge were compelled to wait, thereby causing delay in service and contributing to overcrowding of patients in wards. The study further established the quality of service that medical staff provided to malaria patients by seeking medical staff contributions.

Medical staff noted that prescribed drugs to patients were not readily available for patients. Drugs are an integral component of the service provided to patients. Its unavailability denies patients access to the service they seek. These factors were found to negatively affect the functional dimension of quality of health care services. Though the previous study (Dr Wanjau *et al.*, 2012) in the literature review mentioned the functional dimension of quality, the study failed to establish it in public hospitals. Hence in their discussion, the study made recommendations on how to improve organizational factors only.

Medical staff suggested that the best way to improve the function dimension of quality is to effect participative management of the wards. Medical staff agreed that collection of revenue, drawing of departmental budgets and purchase of supplies, especially, drugs should be done at departmental level, which is ward level. The three factors have a close relationship. Medical staff working in wards stands a better position to identify the needs of the wards in terms of supplies and their priority. They then should draw a departmental budget based on these needs and use revenue collected at ward level to make departmental purchases. Such a process should ensure quick services to patients, not just in terms of availability but also accessibility. This study established that the absence of participative management in wards contributed to low motivation among medical staff and consequently, lack of job satisfaction in their work. This in turn affects the quality of services provided to patients. The previous study (Wanjau *et al.*, 2012) in its discussion encouraged monitoring of doctors and nurses to ensure performance practice standards. This study takes a different stand. Instead of monitoring there is need to initiate into the medical staff a sense of intrinsic motivation to work, by ensuring that they derive motivation in their job and consequently job satisfaction. Medical staff suggested that there was need for them to be involved in decision making and problem solving. A case in point was discharge of patients when due. Medical staff on duty should be empowered to perform this duty without waiting for the sole authority who may not be present. Medical staff working in the wards needs to be involved in setting of their work goals and drawing of their work schedule. Such goals and work schedule will be more realistic and practical thereby motivating medical staff to work without supervision of any kind.

This study established the effect of organizational factors on the quality of health care services. The study noted that there was lack of regular capacity building of medical staff on management of malaria. The dynamics in malaria as a disease make capacity building a need for medical staff. The study further established that the number of medical staff serving in wards for malaria patients failed to meet patient demand. Thus ratio of patient to medic was high. Finally the wards lacked microscopes and computers, which are vital equipment in management of malaria. Equally, medical staff lacked the relevant skills in operation of microscopes and computers. Microscopes and computers are necessary in improving the technical dimension quality of services. They should be used in examination of specimens from patients and payment of bills, as well as keeping of records on malaria patients within the wards. In turn these services would help to increase the speed of services hence improve the functional dimension of quality of services.

This study concurs with the previous study (Wanjau *et al.*, 2012), which states that adoption of modern technology should facilitate service assessment and help provide efficient and effective service quality hence reduce time lags in getting laboratory results and ensure access to relevant information. This thus established through medical staff suggestions that there was need to equip wards for malaria patients with microscopes and computers; train medical staff in relevant skills for operating these equipment; provide adequate room in wards for malaria patients, to adequately patients, medical staff and medical equipment; and to increase medical staff to meet patient demand. This study concurs with these recommendations as aptly stated in the previous study (Wanjau *et al.*, 2012).

Meeting the patient and medical staff requirements in public hospitals as suggested in this discussion will lead to a state of autonomization (Wavomba *et al.* 2015). Autonomization should improve both the functional and technological dimensions of services to patients.

VI. Conclusion

The study concluded that there was a statistically significant relationship between organizational factors and the quality of service delivery. Insufficient organizational factors established in the study contributed

to low quality of service delivery in public hospitals. Therefore, there is need to improve organizational factors in order to increase the quality of service delivery to malaria patients.

Recommendations

In view of the objectives, findings and conclusions made the following recommendations are suggested.

1. To achieve quality service delivery to malaria patients, there is need for empowering medical staff in setting their work goals, solving problems and making decisions concerning their work processes.
2. Public hospital organizations should improve their capacity of organizational factors in order to achieve full autonomization of departments
3. Laboratory, pharmacy and payment of bills services should be provided within the wards. These will ensure quick services to patients.
4. Organizational factors should be improved in order to provide quick services to patients. More medical staff should be hired and be exposed to vast capacity building opportunities in current trends in infection and management of malaria. They should also be equipped with relevant skills in computer and laboratory operations. More room should be created for the wards to adequately accommodate patients, medical staff and equipment.

All these recommendations closely relate to recommendations made by the same researcher in another study (Wavomba *et al.*, 2015).

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