Determinants of Quality of Patients Care in Public Hospitals in Uganda: Requirements for Organizational Effectiveness Clients' Perspective

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Abstract: *This study provides empirical evidence on the determinants of patient care services in a referral hospital in Uganda. It focuses on Iganga Regional Hospital. The objectives were; (1) to determine the influence of eleven independent variables on patient care; (2) to establish the relationship between patient care and the eleven variables in the study. Results show that patient care significantly depends on maternal health services [β = .248, t = 2.251, p < 0.028] and outpatient curative services [β = .330, t = 3.107, p < 0.003]. In addition, the F ratios support the finding that all the variables differently and significant determine patient care. It was therefore concluded that in order for referral hospitals to regain their glory and win back the hearts of the service users, there is need to ensure that their services that are offered in child health care, STI/HIV/AIDS, and tuberculosis are improved with adequate physical infrastructure, sanitation facilities as well as equipments, drugs and facilities to fit the expectations of patients so as to realize organizational effectiveness in the health sector.*

Keywords: Patients care, organizational effectiveness, maternal health services, physical infrastructure, sanitation facilities

1. Introduction

Patients put high pressure on hospitals to provide and deliver cheap but standard and high quality services that conform to or exceed their expectations. In this way, patients always develop new needs and expectations which require hospitals to strengthen their capacity to satisfy client needs. Therefore, hospitals in Uganda like elsewhere, are expected to ensure that things happen the right way because of the present information driven society which enable patients to develop high expectations as they are well informed more than ever before. Hospitals in Uganda have been accused not only of negligence but also of having poor public relations, dilapidated infrastructural facilities, insufficient drugs and even unprofessional practice from the medical staff personnel themselves. The main purpose of the study therefore was to investigate the determinants of patient care in Iganga referral hospital using eleven (11) variables that have been developed by this study as surrogates of organizational effectiveness. They include; (1) child health services; (2) maternal health services; (3) STI/HIV/AIDS services; (4) tuberculosis services; (5) outpatient curative services; (6) supervision services; (7) equipment, drugs and services; (8) infrastructure; (9) availability of specialists; (10) staff training and development; and (11) sanitation facilities. The theoretical foundation of this study therefore is that patient care and satisfaction with health services should be investigated and documented for several reasons; (i) satisfied patients are most likely to maintain a consistent relationship with a specific provider; (ii) by identifying sources of patient dissatisfaction, a hospital can address system weaknesses, thus improving its risk management; (iii) satisfied patients are more likely to follow specific medical treatment plans; and (iv) patient satisfaction measurement adds important information on system performance thus contributing to the hospital's total quality management process and overall performance.

The research by Aldaqal *et al.,* (2012) observed that waiting time in both the emergency and outpatient departments, response time taken by doctors and nurses, do influence patient satisfaction.

This means that the determinants of patient care are key to organizational effectiveness because existing hospital physical resources, drugs, equipment and the readiness of staff to handle patients shape service delivery that is relevant to patient needs and priorities.

2. Literature Review

According to Tateke *et al.,* (2012), patients have explicit desires for services whenever they visit hospitals. Many cases of patient dissatisfaction can therefore occur due to inadequate discovery of their needs and this is especially true when the expected services are not delivered either due to lack of facilities or personnel in a given hospital. According to Donabedian (1987), a satisfied patient is more likely to comply with advice or treatment given by health workers.

Moreover, Muhondwa *et al.,* (2008) observed that perceived waiting time is a strong predictor of patient satisfaction in that if waiting time is longer than what is expected or considered appropriate, dissatisfaction will arise no matter how long the actual waiting takes. Similarly, unfulfilled expectations are related to lower patient satisfaction (Muhondwa et al, 2008). The present study adds that absence of equipments, drugs and specialized personnel determine the quality and effectiveness of patient care.

In the same vein, Tateke *et al.,* (2012) have noted that health services provided in health care institutions need to be satisfactory so as to provide the intended effects of the services.

The research by Syed et al (2007) also documents that perceived competence of the hospital staff and their demeanor has the greatest impact on customer satisfaction. They stress that the quality of communication and the general condition of the facilities have significant effect in explaining customer satisfaction with hospital services. Besides, a clean and organized appearance of a hospital, its staff, its premises, restrooms, equipment, wards and beds can influence patients' impressions about the hospital.

Additionally, Okiria *et al.,* (2013) observed that information flow is very critical in the effectiveness of the supply chain of essential drugs in the public health sector and recommended among others that there is need for improvement in record keeping and computerization of medicine management system in hospitals.

According to Ambroz and Praprotnik (2008), customers who are satisfied with the quality of the relations with the employees are more satisfied with the quality of the service. Organizational effectiveness is in this case related to the ability of the service provider to satisfy the customer. A service provider, who is in position to offer not only extra but better quality services, will have a greater chance to satisfy a customer. It is observed here that a modern customer needs positive experience and services that can not only enhance self-image construction but also personal development which aspects are significant contributors to increased life expectancy. Therefore, by improving the procedures and arrangement of health physical facilities that offer comfort and ease, by organizing timely and prepared services, and through streamlining contacts with patients supported by written information, patient experiences are broadened which ultimately lead to their satisfaction.

Anderson et al (1994) concluded that in service industries, client satisfaction with the vendor depends not only on the past and the ongoing experience with the product, but also on the anticipated quality of the future service as well as the ability of the service to provide for the future needs.

3. Methodology

All patients who visited Iganga Hospital during the study period were the source of the population for this study. The study population included patients who were identified by systematic random sampling at the different selected units of the hospital. It should be noted that during the interviews, critical ill patients were excluded unless they had a caretaker who was willing to respond. Parents or caregivers of children were interviewed concerning their children.

Data was collected using a structured questionnaire. The questionnaire was developed in English and translated in the local language to ensure grasp of content and consistency.

Using this method, only 71 respondents returned completed questionnaires. This was premises on the assumption that while a significant amount of health data comes from the community and environmental observations, a great amount of valuable detailed health data originates from patients in their encounters with health professionals. In addition, surveys and surveillance activities collect more data from and about individuals.

The self administrative questionnaire was used with a Likert scale in which respondents reported the degree to which they agree with various statements i.e. 5 = Strongly Agree to 1 = Strongly Disagree. The statements included items such as; the hospital capacity to maintain regular immunization services, the availability of enough drugs for children, enough doctors to handle birth related complications, availability of laboratory testing capacity for monitoring HIV clients and availability of enough antiretroviral drugs and medicine for TB treatment, availability of enough buildings for health service delivery, availability of enough toilets and bathrooms for both staff and patients, among others.

The data collected was processed before the actual analysis and this involved checking the completed questionnaires to check for any errors that might have been committed. This process involved editing the data, coding the data, entering the data in the computer and summarizing the data. Analysis used Pearson correlation and regression methods as enshrined in SPSS version 20.

The reliability of the questionnaire was ascertained using Cronbach's Alpha coefficient. The coefficient for this questionnaire was 0.9324 which demonstrated that the questionnaire was reliable for use.

4. Results

In order to determine the relationship between patient care and the eleven variables under study, a correlation matrix was developed and the results are indicated in table 1.

Table 1: Correlation matrix for the different study variables in health care

	1	2	3	4	5	6	7	8	9	10	11	12
1. Child health services	-											
2. Maternal health services	.551**	-										
3. STI/HIV/AIDS services	.433**	.425**	-									
4. Tuberculosis services	.467**	.564**	.482**	-								
5. Outpatient curative services	.466**	.420**	.304**	.510**	-							
6. Supervision	.374**	.460**	.349**	.409**	.459**	-						
7. Equipment, drugs and facilities	.437**	.494**	.460**	.521**	.422**	.516**	-					
8. Infrastructure	.199	.281*	.255*	.393**	.463**	.464**	.617**	-				

9. Availability of specialists	.270*	.189	.318**	.146	.191	.269*	.380**	.396**	-			
10. Staff training and development	.078	.237*	.131	.283*	.289*	.060	.312**	.398**	.448**	-		
11. Sanitation facilities	.223	.173	.209	.163	.317**	.249*	.318**	.526**	.529**	.535**	-	
12. Patient care	.562**	.571**	.415**	.437**	.607**	.471**	.559**	.426**	.446**	.296**	.471**	-

*. Correlation is significant at the 0.05 level (2 tailed)
**. Correlation is significant at the 0.01 level (2-tailed)

As indicated in table 1, patient care is related to how well child health services are provided. Therefore the more the hospital has capacity to maintain regular immunization services, have equipments and supplies for assessing the sick available and store enough drugs for children, the better its services and hence patient care. Similarly, the more the hospital offers maternal health services and ensures that there is normal delivery and medicines and supplies of complicated deliveries are available with enough doctors to handle birth related complications, the more the patients appreciate its services. Therefore, antenatal clients should be regularly assessed and counseled to their satisfaction.

A good referral hospital should also provide tuberculosis services, outpatient curative services and have effective supervision that all significantly correlate with patient care. The results further reveal that the availability of equipment, drugs and facilities as well as infrastructure and specialists in hospitals, influence patient care and therefore these should also be availed in sufficient quantities. As expected, a good hospital should provide training and development and put in place sanitation facilities such as enough toilets, incinerators, bathrooms and the like. All these variables significantly correlate with patient care.

Results of regression analysis

In order to find out the determinants of patient care that directly influence the dependent variable, a multiple regression analysis was performed using patient care as the dependent variable. It was constructed with the hypothesized model that there is a positive and significant influence of the eleven variables on patient care. The hypothesized model can be summarized as follows;

$$P/C = \beta_0 + \beta_1 CH + \beta_2 MH + \beta_3 HIV + \beta_4 TS + \beta_5 OPD + \beta_6 SUP + \beta_7 EQ + \beta_8 INF + \beta_9 SDR + \beta_{10} TRN + \beta_{11} SAN + \varepsilon$$

Where:
P/C = Patient care
CH = Child health services
MH = Maternal health services
HIV = STI/HIV/AIDS services
TS = Tuberculosis services
OPD = Outpatient curative services
SUP = Supervision
EQ = Equipment, drugs and facilities
INF = Infrastructure
SDR = Availability of specialists
TRN = Staff training and development
SAN = Sanitation facilities

As indicated in table 2, the multiple regression results reveal that patient care is directly influenced by two variables which are; maternal health services [β = .248, t = 2.251, p < 0.028] and outpatient curative services [β = .330, t = 3.107,

p < 0.003]. Others did not directly influence patient care although they significantly associate with it as illustrated in the correlation analysis table 1. This implies that the value that the community attaches to this hospital is characterized by two services that are performed significantly. Maternal health services measured the extent to which the hospital ensures normal delivery services and has medicines and supplies for complicated delivery services. It also measured the extent to which the hospital has enough doctors to handle birth related complications as well as the extent to which the hospital has regular assessment and counseling of antenatal clients.

The second facet, outpatient curative services measured the extent to which the hospital has regular treatment for outpatients, availability of doctors and drugs for outpatient services. Therefore this implies that patient care is determined by the extent to which drugs and doctors are available and this is exactly what makes a hospital.

In addition, further analysis using Anova revealed that all the variables have a main effect on patient care with [F = 9.397, p<0.0001] implying that each of the variables has different significant contributions to patient health care.

The implication of the finding here is that Iganga Referral hospital has effectively performed in those two aspects only. Therefore there is need for government and administrators in the public health sector to address the issues that were insignificant in this model so as to make them effective and impact on the customer welfare. They include; child health services, STI/HIV/AIDS services, tuberculosis services, supervision, infrastructure, availability of specialists, staff training and development, sanitation facilities as well as equipment, drugs and facilities.

Table 2: Regression Model results using Patient care as the dependent variable

Variable	Predicted sign	β	t – value	p – value
Intercept	+-	-2.115	-2.489	.016
Child health services	+	.131	1.209	.232
Maternal health services	+	.248	2.251	.028
STI/HIV/AIDS services	+	.020	.200	.842
Tuberculosis services	+	-.066	-.581	.564
Outpatient curative services	+	.330	3.107	.003
Supervision	+	.031	.297	.768
Equipment, drugs and facilities	+	.187	1.549	.127
Infrastructure	+	-.095	-.780	.438
Availability of specialists	+	.164	1.526	.132
Staff training and development	+	-.020	-.197	.844
Sanitation facilities	+	.204	1.977	.053

5. Discussion

The finding of this study is quite comparable with other studies which were conducted in other countries. For

example, Aldaqal *et al.,* (2012) documented the determinants of patient satisfaction in the surgical ward at a University Hospital in Saudi Arabia. Their conclusion was that patient satisfaction is a critical health care outcome indicator. Similarly, Tateke et al (2012) documented the determinants of patient satisfaction with outpatient health services at public and private hospitals in Addis Ababa, Ethiopia and observed that improvement of health care quality is a primary issue for both health care providers, health service managers and those who commission the services for patients. The results here reveal that the determinants of patient care include not only the availability of specialists and equipment, drugs or ward facilities but also physical infrastructure, sanitation facilities as well as staff training and development.

The research by James (1989) proposed the need for quality management in hospitals and suggested that there is need for hospitals to maintain two aspects in this regard; (1) a continuous quality improvement model that help hospitals develop a top-down, organization-wide commitment to quality management and improvement; and (2) a quality assurance model which ensures that risks are managed effectively in hospitals and that there is quality service provided in each and every unit of the hospital.

According to Wagner et al., (2002), although the majority of disease burden and health care resources is related to the treatment of chronic conditions, the health care system in some hospitals is not properly organized so as to provide acute care and adequate patient needs. Therefore, the study here adds that human resource staff and other infrastructural facilities are significantly needed in referral hospitals so as to ensure quality service delivery. This will in the long run ensure effectiveness and patient satisfaction with hospital services. The challenge of government therefore is to ensure that the hospitals that have been earmarked as referral hospitals are conditioned to continuously improve their services, demonstrate deliverance service capability and ensure that facilities of the hospital are in conformance with the needs of the patients.

6. Conclusion

In conclusion, this study documents the determinants of patient care and examined eleven different variables that significantly correlate with patient care. Therefore in order to ensure survival of the population and longevity in the services provided by the hospital, there is need for a paradigm shift that requires adaptation and achieving maximum patient care so as to register satisfaction. The findings here suggest that when trying to assemble the determinants of patient care, it is important to know that the eleven variables are considered and they are therefore critical determinants of organizational effectiveness. Hospitals in Uganda are expected to have the professionalism and/or have an organizational culture that can propel the employees to serve better by providing drugs on time and attending to patients as expected. It is by so doing that the culture that fosters customer satisfaction and competitive advantage can be built within the hospital industry and be able to sustain the customer needs and expectations.

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