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Challenges Facing Implementation of Referral System for Quality Health Care Services In Kiambu County, Kenya

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Abstract

The right to the highest attainable standard of health is a fundamental human right and, central to this right within a hierarchical health system, is the existence of a well-functioning referral system that allows for continuity of care across the different tiers of care. A referral system enables management of client health needs comprehensively with resources locally unavailable. This study sought to establish challenges facing implementation of the referral system for quality health care services in Kiambu County, Kenya. Specifically, investigated the influence of infrastructure, capacity of health care workers, health information systems and financial resources on implementation of health care referral system. A cross-sectional research design was done targeting health care workers in public health care facilities Tier 2 and Tier 3 in Kiambu County and two hundred and seventy one respondents took part in the study. A statistical analysis was done using SPSS 20 and Excel 2013. Both questionnaires and interview guide were employed as data collection tools which attained quantitative and qualitative data. Inferential statistics was used to conduct regression analysis. From the findings of the study it was established there existed a relationship between independent and dependent variables as revealed by infrastructure with coefficient 4.457; capacity of health care workers with coefficient 4.105; health information systems with coefficient 4.405; and financial resources with coefficient 4.013. The p value was <0.001. The study concluded that infrastructure, health information systems, capacity of health care workers, and financial resources are challenges in implementation of health care referral system in Kiambu County and should be strengthened. The study recommended that Kiambu County Health care facilities should improve infrastructure; implement a standard referral system monitoring toolkit and curriculum to train health workers on the referral policies and guidelines; develop standard referral forms/registers and provide adequate funds for implementation monitoring and evaluation.

Keywords: Challenges; Implementation; Referral system; Health care services.

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Introduction

The World Health Organization (WHO) identified six building blocks of a health system in its Framework for Action. One of those building blocks is health service delivery. Others are Health Financing, Leadership and Governance, human resource, Pharmaceutical Management and Health Information Systems). For the referral system to be functional, it needs to operate in a functional health system, and the Kenya draft RSPHS 2012–2017 identifies various health system requirements for a well-

functioning referral system [1]. For successful referral, there must be geographical access to referral care facilities. Provided referral services are accessible, referral staff must be trained to provide quality care, services must be affordable and must have essential drugs, supplies, and equipment. The most complex aspect of referral care is often the caretaker's acceptance and compliance with a referral recommendation. This is often determined by a variety of factors, including the perceived need of a referral like the disease severity, caretaker or community experience with and the impressions of the referral facility, and the cost (time and resources).

In most countries there are two major types of health facilities—primary care facilities and hospitals. Health care systems are often designed to encourage caretakers to first seek care at the primary level and then be referred, if necessary, to a higher level of care. If this reflects actual care seeking behavior, then health care costs for the caretaker will be minimized [2]. In many countries, however, caretakers often bypass primary care facilities and seek care directly at referral care hospitals for illnesses that could be easily treated at the primary care facility [3]. This can overburden the referral facility, and is often costlier for the caretaker and the health care system.

The right to the highest attainable standard of health is a fundamental human right [4]. Central to this right in the delivery of health care in a hierarchical health system is the existence of a well-functioning referral system that allows for continuity of care across different tiers of care. Most health systems in the world are hierarchical, starting with primary care, to secondary care facilities, to the highest level of care, which consists of tertiary-level facilities that provide highly specialized services. In most developing countries, however, health referral systems across the various levels of care are weak, which affects the overall performance of the health system and contributes to negative health outcomes.

The Kenyan health system is organized around six levels of care that fit into four tiers of care, based on the scope and complexity of the services offered. Tier 1 community units, Tier 2 dispensaries and health Centres, Tier 3 County health facilities and Tier 4 national referrals. In Kenya, found that the location of healthcare facilities far away from the population affects the level of use of health services. He found that the more accessible one is to a health facility the more one is able to make use of it [5].

The mandate of the Counties includes, among others, the provision of health services and management of referrals in County Health facilities and pharmacies. The Kenya Health Policy 2012–2030 has identified the need to strengthen the referral system in Kenya as a way of improving efficiency in the health system and improving health outcomes [5]. Some of the critical investment priorities for the referral system outlined in KHSSP 2012–2018 include updated referral tools and guidelines at all levels, orientation of the management teams on their referral roles and functions, and tools for referral allowances for expertise movement and fuel for travel. The health sector has developed a referral strategy, standard guidelines, and forms to guide the sector in building an effective system that responds to the needs of rural and poor populations.

The strategy classifies referrals in four categories that include: client movement, service or expertise movement, specimen movement and client parameter movement this can help achieve Kenya's realization of Vision 2030, and other health-related targets.

There are only two types of referrals: emergencies and elective for both types of referrals, prognosis is the most important criteria [6]. It is preferable to initiate medical referral at the early stages of illness when the prognosis has a higher probability of being favorable.

Kiambu County is one of the 47 Counties under the Constitution of Kenya. It is located in the central region and has a population of 1,782,083 million as per the 2009 Census. Its headquarters is in Kiambu Town and the largest town is Thika. Has a workforce of 4025 from different medical cadres. Most of them work in public health facilities 3353; it also has 487 non-medical and staff and has a total of 315 health facilities 80 of them public.

Statement of the Problem

Efforts aimed at strengthening referral system endeavor to comprehensively manage clients' health needs by using resources beyond those available where they access care. Common barriers to successful referral are generally known, the relative importance of these constraints should be assessed in each country or region to guide the design of targeted, appropriate interventions to improve referral.

The Kenya Health Policy 2012–2030 [6] has identified the need to strengthen the referral system in Kenya as a way of improving efficiency in the health system and improving patient outcomes.. Some of the critical investment priorities for the referral system outlined in KHSSP 2012–2018 include updated referral tools and guidelines at all levels, orientation of the management teams on their referral roles and functions, and tools for referral allowances for expertise movement and fuel for travel. The Kenyan health sector has developed a referral strategy, with standard, guidelines, and forms to guide the sector in building an effective system that responds to the needs of rural and poor populations.

Kiambu County has a large population 1,812,083 with doctor patient ratio of 1:9090, as opposed (1:311) and nurse patient ratio of 1; 7,691 as opposed 1:220 and 1 clinical officer per 12500 patients [7].

Despite the efforts by the government to improve the referral system in Kenya in order to improve efficiency in the health system and health outcomes, no evaluation has been carried out by the government or scholars to determine the challenges facing implementation of health care referral system for quality health care service delivery in Kiambu County. Therefore, this study sought to bridge the knowledge gap by establishing the challenges facing implementation of referral system for quality health care services in Kiambu County.

Main Objective of the Study

The study was carried out to investigate the challenges facing implementation of referral system for quality health care services in Kiambu County.

Specific objectives

- To establish the infrastructure challenges influencing implementation of referral system for Quality health care services in Kiambu County.
- To Investigate how capacity of health care workers influence implementation of referral system for quality health care services in Kiambu County
- To establish the extent to which health information system

influencing implementation of referral system for quality health care services in Kiambu County.

- To determine the extent to which financial resources influence implementation of referral system for quality health care services in Kiambu County.

Literature Review

Most countries in the world have two major types of health facilities primary care facilities and hospitals. Health care systems are often designed to encourage caretakers to first seek care at the primary level and then be referred, if necessary, to a higher level of care. If this reflects actual care seeking behavior, then health care costs for the caretaker will be minimized [2]. In many countries, however, caretakers often bypass primary care facilities and seek care directly at referral care hospitals for illnesses that could be easily treated at the primary care facility [3]. This can overburden the referral facility, and is often costlier for the caretaker and the health care system

A study from Tanzania showed that 91% of sick children and 75% of admissions at the referral hospital came from within a 10-kilometer radius. Only 235 out of the 7,989 children (3%) had been referred to the hospital (Font 2002). A referral assessment done in Ghana showed a similar finding with only one out of 34 (3%) caretakers interviewed in the OPD at referral facilities having been referred. Of the children admitted into the inpatient ward, only 11% had been referred to the hospital [8].

A recent study in Tanzania found that of the referrals that arrived at the hospital, almost half (48%) delayed by two or more days. A study in Uganda also showed that of those who accessed the referral site, only half did so the same day (Peterson et al 2003). In contrast, a positive finding from a referral assessment in Ghana found that of referred cases that arrived at the referral site, 96% arrived within one day of the referral [8].

A study in Uganda showed that while health workers perceived that a majority (64%) of children referred complied, the reality was that only 28% actually accessed referral care [9]. Health workers also perceived cost and the availability of transport as the main barriers, although in reality the cost of medical care at the referral hospital was the principal constraint for caretakers not accessing referral. A referral assessment in Eritrea found that only 38% of referrals found through record review made it to the next level of care [10]. Very little is known about what happens to severely ill children who do not comply with referral.

Using a two-week prospective follow-up of 227 referred children; a study in Uganda found that only 63 (28%) caretakers complied with referral. At the two-week follow-up, 216 out of 227 caretakers reported the child's health status. Of the 185 children who complied with referral the next day or later, or who did not comply with referral at all, 5% had died. There were no deaths reported among the children who complied with referral the same day the recommendation was made [11]. Although common barriers to successful referral are generally known, the relative importance of these constraints should be assessed in each country or region to guide the design of targeted, appropriate interventions to improve referral.

Other prerequisites to a functional referral system include accountability for provider's performance and supportive supervision to improve performance, formalized communication and transport arrangements between the referring and receiving facilities, pro-poor protection against costs of emergency referrals, capacity to monitor the effectiveness of the referral system, and government support of the referral system through the health policy. The Kenyan health system is organized around four tiers of care, based on the scope and complexity of the services offered [5]. At the first tier/level, the health system is organized in Community Units (CU). The second tier consists of primary care health facilities that have dispensaries and health centres run by nurses and clinical officers respectively. The third tier consists of the County Referral facilities, which include the former primary and secondary hospitals [5]. The fourth tier, the National Referral facilities that offer highly specialized care, is used for training and support research.

Some of the challenges in health referral systems in most developing countries include noncompliance with referrals [12] delays in referral completion [9], high numbers of self-referrals to higher-level referral facilities [13] weak health information systems to capture referral data, poor transport arrangements for emergency referrals [14] and inadequately resourced referral facilities [13].

According to Ramdas [15], communication to both the users of the service and their families are mandatory when the referrals related to the users are being made to the various levels of services. The use of a provincially standardized referral letters that would serve to channel clinical information both upward and downwards in the referral chain is obligatory. All institutions must be knowledgeable of the contact details of the key managers and the key clinicians on duty.

Transport is identified as a key constraint on achieving the child and maternal health goals in many of the developing countries in Africa. It is clear that transport and Health are inextricably linked according to WHO/UNICEF starkly describes the consequences of inadequate transport for the delivery of basic health care.

There must be smooth and prompt vehicles to address emergency cases and referral cases at every level of health care. From literature review transport causes delay in deciding to seek care and receiving care at health facilities identified as contributing to deaths among women with obstetric complications (Farm, 1992; Maine, 1997)

WHO estimates that 75% of maternal deaths can be prevented through timely access to child-birth related care. The transport sector therefore plays an important role in achieving the fifth millennium development goal of reducing maternal mortality by 75% by 2015. Studies on the accessibility of referral hospital care have repeatedly confirmed the existence of a steep distance-decay function, in countries such as Ethiopia [16] and Nigeria, indicating that individuals with a given need for a clinical service will be less likely to access that service the farther away from the referral center they live.

In Kenya, found that the location of healthcare facilities far away from the population affects the level of use of health services.

In general, physicians receive little training on when to make a referral [17]. While providing feedback to providers, improving training, or holding regular meetings between providers might help in improving referrals.

Other studies have looked at the benefits of physicians training on how to write referral letters.

Few studies have examined the effect of electronic medical records (EMRs) on care coordination in general or on referral process in particular [18]. Computer access to compare notes has been associated with increased communication between referring physicians and specialists. Specialists receive written or e-mail referral letters twice as often than by telephone or other verbal communication [19].

In most developing countries appropriate allocation of resources to referral hospitals within the national health system has long been a controversial issue in health system planning according to [20].

Perhaps the most frequent theme in research literature on referral hospitals in developing countries is the inappropriate utilization of higher-level facilities and the apparent failure of most referral systems in developing countries to function as intended [21].

Theoretical Framework

The study was based on theoretical model of Referral- Pathway which explains how the Referral process actually takes place in a given country. In most countries there are tiered systems of health care, often having three levels [22]. Kenya follows in this category

Method

Study design

Cross-sectional research design was used on this study that was carried out in the month of June 2015.

Study area

The study was carried out in Kiambu County Kenya. Kiambu County is one of the 47 Counties under the Constitution of Kenya. It is located in the central region and has a population of 1,782,083 million as per the 2009 Census. Its headquarters is in Kiambu Town and the largest town is Thika.

Kiambu County has 12 constituencies (Thika Town, Ruiru, Juja, Kiambu Town, Kiambaa, Githunguri, Limuru, Lari, Kikuyu, Kabete, Gatundu South, Gatundu North).

Study population

The target population comprised of health care workers from 5 sampled Sub-County Health facilities (Health Centres, dispensaries and county referral hospitals) from Kiambu's 12 Sub Counties [23].

The researcher used random sampling to get a target population of 5 Sub Counties whose health workers were sampled from

dispensaries, Health Centres and Hospitals [24]. The researcher purposively chose to interview the following stratified cadres (nurses, medical doctors, consultants, health record officer, medical laboratory technologists and facility administrators. These were considered as the cadres with pertinent information on referrals (**Table 1**). Kiambu County public health facilities have a total workforce of 3353 different medical cadres, from a total of 80 public health facilities [25].

Sampling technique

The study adopted stratified random sampling (). The sample size was given by Fischer's formulae:

$$n = p \times q \left[\frac{z}{e} \right]^2, \text{ adjusted to } n' = n / (1 + n/N) \text{ approximately} = 271$$

Method of data analysis

Analysis of the data was done using SPSS version 20.0 software and Microsoft office excel The inferential statistics constituted of multivariate regression analysis and correlation analysis which was used to determine the relationship between the dependent and independent variables was tested at 95% confidence interval with p value of < 0.05 being significant

Legal and ethical considerations

To carry out the study, formal clearance was received from Kenya Methodist University as well as Kiambu County Health Research department, head of the institution where the study was carried out. The researcher explained to the respondents about the research and that the study was for academic purposes only. The participants had informed consent to make the choice to participate or not. They were guaranteed that their privacy was protected by strict standard of anonymity.

Data collection

The data was collected from 1st June to 30th June 2015 questionnaires were used to collect primary data from all respondents and interview guide from health administrators and nursing officers in charge in sampled facilities done through face to face interviews.

Table 1 Calculated sample size.

Cadre	Population	Proportion	Sample Size
Consultants	26	(271/919)*26=7.6	7
Medical Officers	54	(271/919)*54=15.94	16
Clinical Officers	82	(271/919)*82=24.1	24
Nurses	664	(271/919)*664=195.8	195
Laboratory Technologists	51	(271/919)*51=15.0	15
Health Administrative Officers	5	(271/919)*5=1.4	1
Health Records Officers	37	(271/919)*37=10.9	11
Total	919		271

Results

Response rate

A total of 198 (73.6%) of the respondents participated in the study out of the sampled 271 giving a response rate of 73.6%. The respondents included consultants, medical officers, nurses, medical laboratory technicians and hospital administrators, from five sampled sub counties in Kiambu County.

The Statistical Package for Social Sciences (SPSS version 20.0) was used to run descriptive statistics which includes frequency, percentages, mean and standard deviation, the researcher provided tables and figures that summarize the collective reactions **Figure 1** and views of the respondents (**Table 2**).

Infrastructure

The researcher wanted to establish whether the health facilities had transport facilities. According to the analysis of the findings, from data above a majority 133(67.2%) of the respondents indicated there was no transport facilities for patient referral and the remaining 65(32.8%) of the respondents were affirmative. Therefore it was concluded that most institutions in Kiambu County lacked transport facilities for patients on referrals [26].

The researcher asked the respondents to rate the level of adequacy of necessary facilities in the following phases of referral. According to the findings of the study those indicated not sufficient were on statements that transportations of patients is insufficient with a mean of 2.40 and a standard deviation of 0.982, transportation of client parameters from referring hospital with a mean of 1.13 and a standard deviation of 0.562. Transportation of experts to the referral hospitals with a mean of 1.14, standard deviation of 0.820 and transportation of specimen with a mean of 2.04 and standard deviation of 0.718 (**Table 3**).

Thus, it can be concluded that the availability of necessary transport facilities in the phases of referral in, transportations of patients and client parameters, experts and specimen at the referral hospitals was not sufficient.

Capacity of health care workers

The study wanted to establish whether health facilities had skilled work force on referral guidelines (**Table 4**).

Table 2 Whether the health facility had transport facilities for patients on referrals.

	Frequency	Percentage
Yes	65	32.8
No	133	67.2

Table 3 Rating the level of efficiency of necessary transport facilities in the following phases of referral.

	Mean	Standard Deviation
Transportation of Clients	2.13	0.562
Transportation of Clients Parameters	1.40	0.982
Transportation of Experts	1.14	0.820
Transportation of Specimen	2.04	0.718

The findings of the study data above reveal that a majority 105(53.0%) indicated the health care workforce were not skilled on referral guidelines, while the remaining 93(47.0%) were affirmative. Therefore it can be concluded that a majority of the respondents were not trained on referral guidelines.

The researcher wanted to establish whether the health facilities had adequate human capacity to address referral cases (**Table 5**).

Health information systems

The researcher wanted to find out whether the health facilities had standardized referral documents for referrals. A majority of the respondents, 103 (52.0%) indicated the health facilities did not have standard referral documents while the remaining 95 (48.0%) indicated to the affirmative. The findings of the study deduced that most health facilities had no standardized referral documents for referrals. The researcher required the participants to rate the status of referral documents in their respectful health facility (**Table 6**).

A majority of the respondents, 99 (50.0%) indicated fair followed by 88 (44.4%) who indicated poor. In addition, the findings of the study revealed that 6.1% indicated good, 3(1.5%) excellent and remaining 12(4.0%) indicated very poor (**Table 7**).

Therefore, it can be established that a majority of the respondents indicated that health information systems in the health facility was fair. From the findings of the study, it is evident that most health facilities face the challenge of providing referral documentation.

Financial resources

The researcher wanted to find out whether the health facility had budgetary allocation for referrals.

Based on the study findings, a majority 101(51.0%) indicated majority of health facilities in Kiambu County are no allocated, while the remaining 97(49.0%) were affirmative. The study concludes that a majority of the health facilities had no budgetary allocation for referrals (**Table 8**).

Therefore, it can be revealed that most respondents indicated that there were no enough funds for referral cases. The

Table 4 Whether the health facilities had skilled work force on referral guidelines.

	Frequency	Percentage
No	105	53.0
Yes	93	47.0

Table 5 Whether the health facilities had adequate human capacity to address referral cases.

	Frequency	Percentage
No	123	62.1
Yes	75	37.9

Table 6 Whether the health facilities institution had standardized referral documents for referrals.

	Frequency	Percentage
Yes	95.0	48.0
No	103.0	52.0

Table 7 Rating the status of referral documents in the health facilities.

	Very poor	Poor	Fair	Good	Excellent
Frequency	8.0	88.0	99.0	12.0	3.0
Percentage	4.0	44.4	50.0	6.1	1.5

Table 8 Whether the health facility had budgetary allocation for referrals.

	Frequency	Percentage
No	101.0	51.0
Yes	97.0	49.0

researcher required the participants to rate the adequacy of funds for referrals.

A majority (46.0%) indicated not sufficient followed by 21.2% who indicated less sufficient, 15.7% indicated moderately sufficient. In addition, 11.6% indicated sufficient and the remaining 5.6% indicated very sufficient.

Therefore, it can be revealed that most respondents indicated that there is no enough funds for referral cases (**Table 9**).

Discussion

The study found that majority of health care facilities in Kiambu County have challenges in Infrastructure 133(67.2%),Capacity of health care workers 105(53.0%), Health information system and 103(52.0%) and Financial resources 101(51.0%), as indicated by the respondents. This implies that if the above challenges are addressed it would be possible to implement referral system for quality health care services in Kiambu County. These findings are consistent with evidence from other countries where referral system has been studied.

Infrastructure

Transport is identified as a key constraint in achieving the child and maternal health goals in most of the developing countries in Africa as per. Transport and Health are inextricably linked. The WHO/ UNICEF describes the consequences of inadequate transport for delivery of basic health care to the most impoverished – usually rural areas have few or no health care facilities or the means to transport people for medical assistance. From literature review transport causes delay in deciding to seek care and receiving care at health facilities identified as contributing to deaths among women with obstetric complications.

The WHO estimates that 75% of maternal deaths can be prevented through timely access to child-birth related care. Studies on the accessibility of referral hospital care have repeatedly confirmed the existence of a steep distance-decay function, in countries such as Ethiopia [16] and Nigeria, indicating that individuals with a given need for a clinical service will be less likely to access that service the farther away from the referral centre they live. In Kenya, found that the location of healthcare facilities far away from the population affects the level of use of health services.

Capacity of health care workers

Performance is considered to be a combination of staff being available that is retained and present being competent and responsive. Since the start of joint learning initiative (JLI) in 2003,

Table 9 Rating the adequacy of funds for referrals.

	Not sufficient	Less sufficient	Moderately sufficient	Sufficient	Very sufficient
Frequency	91.0	42.0	31.0	23.0	11.0
Percentage	46.0	21.2	15.7	11.6	5.6

the human resource crisis in low-income Countries (LICs) has received global attention, particularly the crisis in sub-Sahara Africa. In some developing countries less than 50% of the required staff is available to serve rural populations; while at times care is provided by non-qualified staff. This situation seriously comprises the health status of the communities, particularly the poor.

Referrals are a link between primary and specialty care. Visits to specialists constitute more than half of outpatient physicians visits in the United States. Referral guidelines also have been promoted as a means of improving the appropriateness of referrals.

It is believed referral guidelines can provide an important foundation for improving the referral process Referral guidelines seeks to formalize and clarify those aspects of the referral process on which there is a disagreement, including which conditions should be managed by specialists or primary care physicians, what type of communication is preferred by the referring and specialist physicians before and after a referral (written, verbal or both), and what tests should be ordered before a referral. In general, physicians receive little training on when to make a referral, while providing feedback to providers, improving training, or holding regular meetings between providers might help in improving referrals.

Health information systems to quality of health care referral

Even though all physicians value communication between referring primary care providers and specialists, both PCPs and specialists cite the lack of effective information Transfer as one of the greatest problem in the referral process.

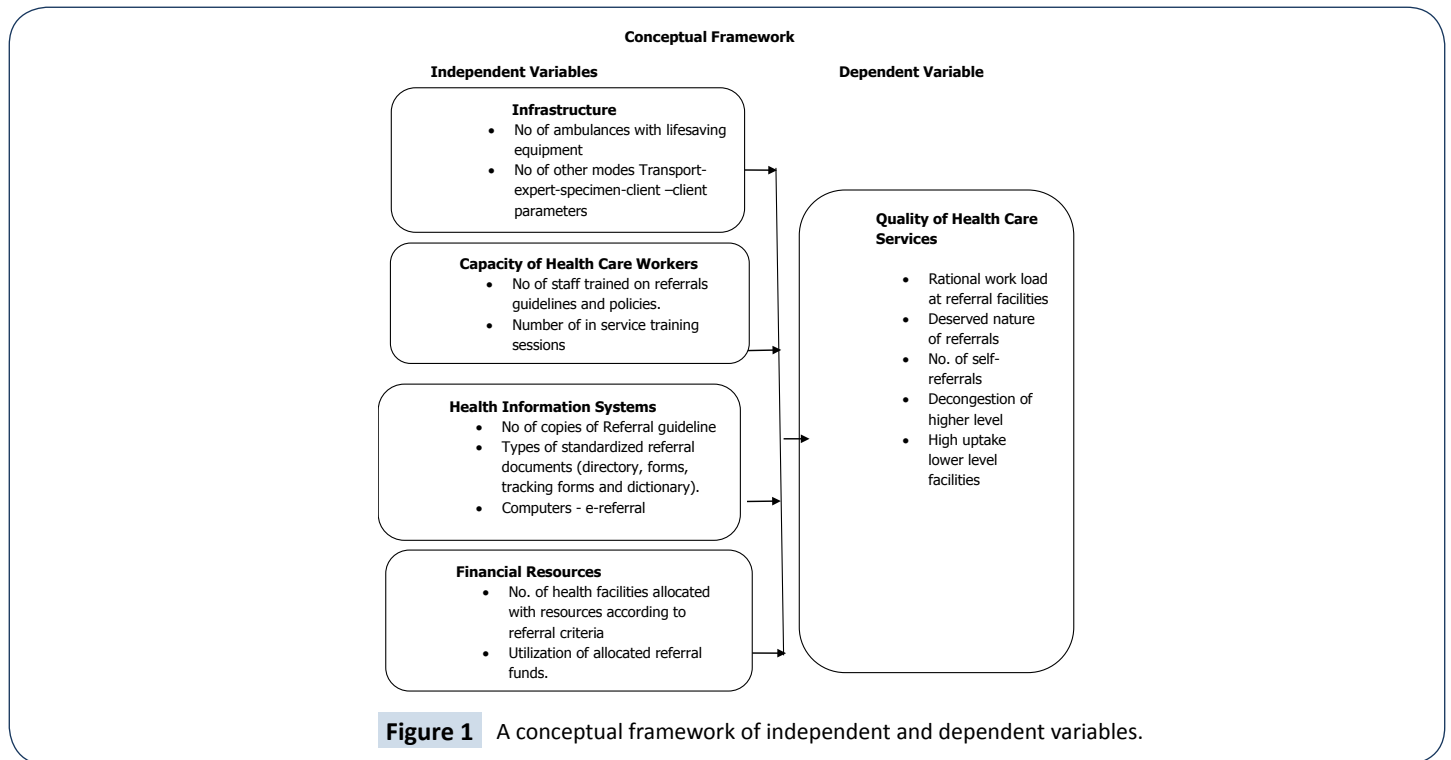
Communicating patient's information at the time of specialty referral is essential to high quality consultation and coordinated safe patient care. Both primary and specialist physicians value this information exchange for shared patient.

According to Ramdas [15], communication to both the users of the service and their families are mandatory, when the referrals related to the users are being made to the various levels of services. The use of a provincially standardized referral letters that would serve to channel clinical information both upward and downwards in the referral chain is obligatory.

Web-based Referrals systems have improved scheduling benefits of e-mail communication about referrals and include the option for asynchronous communication, increased flexibility, opportunities for back-and-forth exchange and enhanced rapport.

Financial resources to quality of health care referral services

In developing countries appropriate allocation of resources to referral hospitals within a national health system has long been a controversial issue in health system planning. A number



of studies have indicated that public hospitals in many poor countries disproportionately benefit the better off, leading their authors to argue that diverting public funds from hospitals and toward primary healthcare would be pro-poor. Yet, Family Care International Kenya reports that peripheral health facilities are the most accessible, especially for the poor. However, if clients are confident that they will be assisted in gaining access to higher-level facilities when needed, they may be less likely to by-pass lower-level care facilities for their health needs [27].

Conclusion

From the analysis of the findings, was concluded that the state of infrastructure in Kiambu County health care facilities is not adequate to enhance implementation of referral system for quality health care services. This reflected on the rating the level of transport facilities in the following phases of referral, transportations of patients, specimen, client parameters and experts. Kiambu County had few skilled work forces for referral of patients. On the state of health information system concluded that most hospitals did not have effective standardized referral documents to facilitate referrals, the concluded that finances were not sufficient for referral. Regression analysis findings concluded that there was a significant relationship among the independent variables and the dependent variable. Therefore, if these factors are embraced in the Kiambu County health referral system will be strengthened.

Recommendations

The study recommends that the national and County levels :Improve infrastructure like transport and IT to enable, patient, client, specimen and client parameters referrals, Develop standard referral system monitoring toolkit and curriculum to train health workers on the referral policies and guidelines to improve referral processes between facilities, Develop standard referral forms/ registers for health care workers to improve communication and feedback between referring and receiving facilities, referral data collection, analysis and interpretation and use of referral system information for decision making, Adequately fund for implementation, monitoring and evaluation, provide regular supportive supervision for improved health care referral services and accountability at all referral levels

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