



International Journal of Advanced Community Medicine

E-ISSN: 2616-3594

P-ISSN: 2616-3586

www.comedjournal.com

IJACM 2021; 4(4): 36-40

Received: 19-08-2021

Accepted: 21-09-2021

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Referral patterns at a regional faith-based hospital in Western Kenya

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DOI: <https://doi.org/10.33545/comed.2021.v4.i4a.213>

Abstract

Aim: To assess the pattern and quality of patient referral at a regional faith-based hospital in Western Kenya.

Methods: A prospective non-randomized study of patients referred into and out of Litein hospital from 1st June through 31st December 2016.

Results: A total of 4,683 patients were admitted during the study period, with 147 `received referral' cases and 106 `sent referral' cases noted, with a referral rate of 3.1%. The majority of the received referrals were formal in nature (76%), initiated by doctors or clinical officers (74%), and had patient/relative input regarding the hospital to refer to (70%). The referral notes were mostly structured (90%) and legible (83%). Advice from the health care professional in the referring facility (36%, n=53), perceived good quality of care (21%, n=31), and presence of a valid insurance cover (8%, n=12) were the main reasons indicated by the patients for choosing our facility.

The "sent referrals" were mainly due to need for specialized care (89%) or for proximity to family members/home (6%, n=6). Only 9% of the patients/relatives indicated that there was a significant delay in the initiation and execution of their referral from AIC Litein hospital. The referrals were initiated, predominantly, from the surgical departments (62%, n=66).

Conclusion: The referrals to Litein Hospital, while comprising a minority of the patients admitted, were predominantly formal in nature, mostly initiated by medical personnel with the family members involved in decision making regarding the facility to be referred to.

Keywords: referral patterns, Kenya, health care delivery

Introduction

The health care system in many developing countries, Kenya included, is organized into a tiered system comprising of primary health facilities (community units, dispensaries and health centers) and referral hospitals (county/regional and referral hospitals) ^[1, 2]. The primary health facilities are intended to be the first point of contact for patients, where management of routine and/or uncomplicated cases is done and more serious or complex conditions are referred to higher level facilities ^[1, 3-5]. The health care delivery using this pyramidal structure has been described as an efficient way of expanding service coverage ^[1, 5, 6].

Referral is the process of temporary or permanent transfer of patient care, from one facility/health professional to another for additional diagnostic or therapeutic services ^[3, 4, 7-9]. Ideally, referral should be undertaken by a health professional, but it may also be done by a social worker, community or by the patient (self-referral) ^[3, 10]. An effective referral system should ensure that treatment is provided effectively, at a reasonable cost, without unnecessary delay and enable continuity of care from one facility to the next ^[2, 4, 7, 11].

While there exists a framework for the referral of patients from one level of care to another, the overcrowding noted in many referral facilities indicates poor referral implementation either by the health workers, patients or both ^[3, 12]. Patients tend to seek services in facilities that offer the best quality of care (high quality consultations and prescriptions, staffed with politer and knowledgeable physicians, or well stocked supplies), and have a good reputation ^[1, 4, 13, 14]. Inadequate knowledge on the scope of services available, perceived low quality of services and search for better diagnostic modalities may contribute to patients avoiding certain health facilities ^[14-17]. The constraints on individual patient care and the health care system as a whole caused by by-passing is acutely evident at tertiary health facilities where the outpatient departments are congested and laboratory personnel are overworked

performing hundreds of routine tests [1, 3, 8, 11].

The available literature on referral patterns has been predominantly from national referral hospitals where unnecessary by-passing of the lower-level facilities by patients and inadequate referral documentation have been documented [10, 18].

The goal of this study was to assess the pattern and quality of patient referral at a regional faith-based hospital in Western Kenya.

Rationale/Justification

The Kenya health sector referral strategy 2014-2018 in tandem with the subsequent implementation guidelines outline a well-structured and harmonized system that ensures continuity of care and cost-effective universal health care. This strategy has become the reference point upon which health care development and advancement policies have been tethered. Despite its acclaimed proficiency, noted discrepancies among referral cases within different facilities especially with regard to self-referrals by-passing primary care facilities with preference to top tier facilities has hampered its advancement. The referral system has with thus regard not realized the ultimate and intended benefits. With most studies focusing policies on national referral facilities, little is known on factors affecting the referral process from mid-tier facilities such as the one in focus in this study. This study therefore aims at providing a precise understanding on factors involving referral patterns at a regional level which will subsequently influence policy making locally. Findings of the study can then be used to guide local /regional policy and even be used as a framework for further study in the field.

Methods

This was a prospective non-randomized study undertaken for six months (1st June 2016 to 31st December 2016) at AIC Litein hospital; a faith based regional health facility, with a capacity of 200 beds located in Kericho county, western Kenya. The data collection tool was a self-developed questionnaire. "Received referral" were defined as patients admitted during the study period that were referred (either formally or informally) from another health facility to AIC Litein or those who after being seen or managed at another facility, had self-referred themselves to our facility. "Sent referral cases" were defined as those in patients who were formally referred to another facility from AIC Litein Hospital. Patients who declined consent were excluded from the study.

Data was collected using preformed questionnaires administered to patients during the study period at point of admission i.e. Outpatient departments, specialty clinics or the emergency department. The variables to be collected included age, sex, occupation, area of residence, initial care facility visited, reason for referral and referral diagnosis, summary of interventions done, and patients' views on quality of care offered. The data will be entered into an access data base and subsequently transferred and analyzed using IBM SPSS Statistics 20.

Results

A total of 4,683 patients were admitted during the study period, with 147 'received referral' and 106 'sent referral' cases were found. The referral rate, noted at 3.1%, was calculated as the number of 'received referral' cases divided

by the total number of inpatient admissions for the study period.

Referral-In Data

The patients were classified as 52% male, 21% children and 67% insured. The highest level of completed education was noted to be 41% for primary, 22% for secondary and 9% for tertiary, while the main occupation was noted to be farming (Table 1).

The patients were referred from public county hospitals (29%, n=43), primary health facilities (25%, n=37), community health facilities (22%, n=33), private health facilities (15%, n=22), and other faith based facilities (7%, n=11).

The majority (76%) of the referrals was noted to be formal in nature, with the patients having a referral note, but a phone call was made to our facility prior to the referral in only 30% of the cases (Table 2). Assessment of the referral notes revealed that 90% were structured, 83% were legible, and 27% were emergent.

While the majority of the referrals (74%, n=109) were initiated by doctors or clinical officers at the referring facilities, nursing staff initiated 7% of the referrals, while relatives and patients initiated referrals in 9% and 8% of the cases respectively.

The majority of the patients (75%, n=110) indicated that they had been involved in the decision making regarding which facility to be referred to (Table 3). Advice from the health care professional in the referring facility (48%, n=53), perceived good quality of care (28%, n=31), presence of a valid insurance cover (11%, n=12), proximity (5%, n=5), presence of diagnostic equipment (4%, n=4), availability of doctors/consultants (3%, n=3) and presumed affordable services (2%, n=2) were the main reasons indicated by the patients for choosing to be referred to AIC Litein Hospital.

Ambulance (31%, n=46), private cars (25%, n=38), public vehicles (24%, n=36) and taxis (7%, n=10) were the main modes of transportation used, with the majority (92%) arriving at our facility six hours-or-less hours after initiation of the referral.

Upon arrival to the facility, 51% were managed as surgical cases, 18% as medical cases, 17% as pediatric cases and 14% as obstetric cases. Only 5% of the referred cases died while undergoing treatment, one patient was subsequently referred to a higher-level facility and 94% being discharged without any complications.

Referral-Out Data

The patients were referred to other faith-based facilities (58%, n=61), public county hospitals (30%, n=32), private hospitals (9%, n=10) and 2% to other facilities. Only 16% of the referrals to other facilities were categorized as emergent.

On the other hand, 77% (n=82) of the referrals from our facilities were initiated by doctors within our facility, 13% (n=14) by family members and 9% (n=10) by the patient. The majority of those referred (97%, n=103) understood and approved the appropriateness of the referral.

The referrals were due to need for specialized care (89%, n=94), need to continue care at a facility close to family members/home (6%, n=6), dissatisfaction with the services provided (1%, n=1), and 5% due to other non-specified reasons.

Only 9% of the patients/relatives indicated that there was a significant delay in the initiation and execution of their referral from AIC Litein hospital. The referrals were initiated from predominantly from the surgical departments (62%, n=66), with the medical, pediatric and obstetric departments contributing 27%, 7% and 4% of the cases respectively.

Table 1: Demographics of referrals received.

Demographic Parameter		Number (%)
Gender	Male	76 (51.7%)
	Female	71 (48.3%)
Highest Level of Completed Education	Primary	60 (40.8%)
	Secondary	32 (21.8%)
	Tertiary	13 (8.8%)
	None	42 (28.6%)
Occupation	Farmers	45 (30.6%)
	Children	29 (19.3%)
	Students	15 (10.2%)
	Salaried Workers	10 (6.8%)
	Unemployed	8 (5.4%)
	Retired	8 (5.4%)
	Self Employed	12 (8.2%)
	Casual Workers	4 (2.7%)
Medical Insurance Cover	Unknown	16 (10.9%)
	Present	99
	Absent	48

Table 2: Nature of referrals received

Indicators		Count (%)
Timing of Referral	Elective	10 (6.8%)
	Urgent	97 (66%)
	Emergent	40 (27.2%)
Type Of Referral	Formal	112 (79.2%)
	informal	35 (23.8%)
Referral Note	No	34 (23.1%)
	Unsure	1 (0.7%)
	Yes	112 (76.2%)
Phone call	No	78 (69.6%)
	Yes	34 (30.4%)

Table 3: Factors affecting choice of facility

Choice of Facility	Count (%)
Advice from referral facility	53 (48.2%)
Availability of medicines	0
Availability of Doctors / consultants	3 (2.7%)
Unsure	0
Perceived good quality care	31 (28.2%)
Affordable Services	2 (1.8%)
Coverage by private insurance	0
Advice from friends and relatives	0
Proximity	5 (4.6%)
Presence of diagnostic equipment	4 (3.6%)
NHIF coverage	12 (10.9%)
Good Reputation	0

Discussion

Prior studies have demonstrated that more referrals are directed towards higher tier facilities with a progressively higher referral rate at national referral hospitals [12]. The referral rate at 3.1% was in keeping with findings in a study done in Honduras by Omaha *et al.*, with a higher average referral rate to national referral hospitals at 16%, 4% at regional, 3% at area hospitals and 1% at health centers [12]. In this review, it was noted that 81% of the referrals were

clinician-initiated, 75% patients received were involved in decision making regarding the facility to be referred to, 67% had insurance cover and 31% had post primary education. These findings paralleled a Nigerian outpatient survey in which 86% of the referrals received were initiated by doctors [3]. Our findings drew similarities from another Nigerian study by Okoli *et al.*, focusing on self-referral patterns portraying 70% engaged in self-referrals with prior clinician guidance, despite 90% having a tertiary education, 85% having insurance and mean age of 40 years [4]. Furthermore, factors influencing individual or facility referral preferences had patient, physician and health system characteristics as the underlying motivating factors. Our study demonstrated a majority (74%) of the referrals received were initiated by clinicians and subsequently due to perceived better quality of care with regards to diagnostic and therapeutic interventions. This reinforced findings obtained from a similar study by Forrest *et al.* in which physician’s factors predominated referral influencing factors [17]. Our findings similarly demonstrated that financial constraints had a part, though slight, in the reasons necessitating the referrals. These findings coincided with the referrals from Litein hospital to other hospitals in which 94% of the referrals were in a guise to seek specialized care. It can therefore be inferred that doctors play a major role in referral patterns and a qualitative outlook shows that specialized care or advanced diagnostic and therapeutic equipment in higher tier facilities is the domineering influencing factor.

A majority (76%) of the referral-ins had an accompanying note with 90% of the referral notes analyzed being structured and 83% were legible. This was mirrored in a study by Omaha *et al.*, in which 70-80% of referred patients had a standardized referral form, but there was no norm to duplicate referral letters for safe keeping [12]. A similar outpatient survey in Nigeria had coinciding findings in which 94% of the patients referred had a referral note [3]. However, a majority (70%) of the referrals received did not have a preceding phone call from the referring facility indicating a need to improve the referral process.

A descriptive cross sectional study done in Kiambu County, Kenya showed that most institutions lacked transport facilities to refer patients, majority of the patients were not trained on the referral guidelines, and lack of a standardized referral documents for referrals [2]. These findings were mirrored in our study revealing that a majority (63%) used other transportation means other than the recommended ambulances. This may have been due to inadequacies or lack of community education on referral transportation. As much as ambulances were the major mode of transport through which patients accessed our facility, a revamp of the transportation mechanism is still necessary since ambulances consisted of only 31%. Cumulatively, other modes of transport were cheaper and more readily available to individuals thus their preference.

With regards to any accrued referral delays of patients received, 66% demonstrated no delays in their arrival from their referring facility arriving to the facility in less than 3 hours. This showed a similar trend with regard to patients referred from our facility in which 79% did not report any delays in their referrals. The findings coincided with findings in a retrospective study in Rwanda in which trauma patients were referred to public facilities with only 20% declaring delays in their referral process [19]. The bulk of

cases (51%, n=75) referred into the facility were surgical which paralleled a similar study by Simba *et al.*, in which surgical cases domineered at 37% [20]. This was similarly (62%, n=66) demonstrated in the upward referrals.

Conclusion

The referrals to AIC Litein Hospital, while comprising a minority of the patients seen, were predominantly formal in nature, mostly initiated by medical personnel with the family members involved in decision making regarding the facility to be referred to.

What is already known on this topic

- Developing countries have adopted a tiered health system with a referral structure within which primary health facilities are the first point of contact.
- The referral structure has encountered challenges in its implementation with many studies based in national referral facilities.

What this study adds

- A description of the referral patterns from a mid-tier health care facility (with emphasis on demographics of referrals, hierarchy of facility, mode of patient transport, pre-referral communication and factors influencing referrals).
- Analysis of the adequacy of referral documentation with comparison to the recommended guidelines regionally.
- Most studies have assessed referral patterns from higher tier facilities within the region, thus this study focuses on providing a clear understanding of referral patterns from a mid-tier facility to aid in local evaluation of the referral process.

Statements

Limitations

This study may not be representative of the whole country as it was undertaken at a single institution. The emphasis of patients who had been managed at a health facility prior to being seen at Litein Hospital may have excluded many patients who may have bypassed other facilities to present here as the initial point of care.

Competing interests

The authors declare no competing interest.

Authors' contributions

Author contributions were as follows: Conception and design (OCK, PBO); acquisition of data (OCK, GKK); analysis and interpretation of data (AMO, GKK); drafting of the manuscript (AMO); critical revision of the manuscript (PBO).

Acknowledgements

Special thanks to the management of Litein Hospital for allowing the study to take place.

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