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Assessment of the Referral System at Secondary and Tertiary Health Care Facilities in Kaduna Metropolis, Nigeria.

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Abstract

Background: Kaduna Metropolis is largest metropolitan area in Kaduna state with a high number of secondary and tertiary healthcare facilities. These facilities are often overwhelmed by large number of patients daily. However, information regarding the referral system among these facilities is limited. The objective is to assess the referral system at secondary and tertiary healthcare facilities within Kaduna metropolis.

Methods/Materials: The study was a cross-sectional survey conducted at four tertiary and two secondary healthcare facilities in Kaduna metropolis, Nigeria. A survey using self-administered questionnaires was conducted among the healthcare personnel at the healthcare facilities.

Results: A total of 165 questionnaires were returned, out of which 114 (69.1%) and 51 (30.9%) were from tertiary and secondary healthcare facilities, respectively. Of the respondents, (89%) had adequate prior knowledge of the referral system. The average monthly referrals received at secondary health facilities was 16, and the referrals were notified by letter and verbal communications. Most of the referrals received at both facilities were self-referrals. Tertiary healthcare facilities received more referrals compared to secondary and private hospitals [p-value < 0.001]. Obtaining detailed information about the patient's illness was the main reason for referrals [p value = 0.002]. There were efforts made by the health workers at the facilities to improve good referral system. There was the availability of referrals forms at both facilities.

Conclusion: The referral system at the secondary and tertiary healthcare centres in Kaduna metropolis is inadequate. Interventions for improvement is therefore needed for optimal utilization of the facilities.

Keyword: *Referral system; Kaduna metropolis; Patients, healthcare facilities; Nigeria*

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Introduction

Referral system is a process in which a patient's case at one level of a healthcare system with insufficient resources such as medications, equipment, skills and manpower to manage the case is transferred to a better facility of the same or higher level with the adequate capacity and relevant expertise to handle such cases [1]. An effective referral system ensures: a linkage between the level of healthcare facilities, optimal utilization of personnel and facilities and improving communication among primary care physicians, specialists, and any other healthcare providers involved in a patient's care. An effective referral system involved five components: a good health system, initiating facility, referral practicalities, receiving facility, and supervision and capacity building [2]. However, ineffective referral system arises when there is inadequacy or inefficiency with any of the five components. Challenges such as poor health system, the inability of the lower level healthcare facilities to initiate referrals, inadequate facilities, poor channels of communication and lack of supervision and monitoring may be responsible for the inefficiency in the referral system [3].

In Nigeria, there are three level of healthcare facilities in the health care system; primary (PHC), secondary and tertiary health care levels which interact through a referral system. The National Health Policy has clearly stipulated the responsibilities of each of the three levels of the healthcare system [4]. The referral system in Nigeria provides that individuals in need of healthcare services first visit the PHCs where the basics and essential needs are provided [1,4]. If their condition is beyond the healthcare provision at the PHC and warrants referral to a secondary health facility they will be so referred. If their condition still requires a higher level of care, they will be referred to the tertiary health care facility [4]. Currently, there are many challenges facing the general health care systems in Nigeria, which may influence the referral system among the level of healthcare facilities. Such challenges included inadequate PHCs in the community, shortage of healthcare personnel, lack of infrastructure and poor knowledge on the referrals system among the general populace [5].

Kaduna is a state located in the northwestern region of Nigeria with the highest number of tertiary healthcare facilities and 996 functional PHCs [6,7]. Most of the tertiary facilities in the state are over-crowded with patients and overworked health workers [8,9]. Despite these, studies that assessed the effectiveness of referral system among these facilities are limited. The objective of the present study is therefore to assess the effectiveness of referral system among secondary and tertiary healthcare facilities in Kaduna metropolis. Assessing the referral system will identify if the referral system is effective and appropriate standard procedures are followed.

Method and Materials

Study setting and population

The study was conducted among the health workers at secondary and tertiary public healthcare facilities in Kaduna metropolis, Nigeria. Inclusion criteria include being a full-staff such as medical doctor, matron, staff nurse, and record clerks. The study was conducted at two secondary health care centres and four tertiary healthcare facilities. Both categories of hospitals are located in Kaduna metropolis, Kaduna State Nigeria. Kaduna is the third most populous state, located in Nigeria with a population estimates of over six million people [5]. The healthcare services in the State are provided from an estimated total of 1,692 healthcare facilities; 40.2% of these health facilities belong to the private sector. 96.5% of all the health facilities are primary health care, 3.2% secondary health care and 0.3% tertiary healthcare facilities. The state is among the few states with a high number of tertiary institutions in Nigeria, with four of these institutions located in the metropolis [10].

Study design and data collection tool

It was a cross-sectional survey study conducted among medical doctors, nurses [matron and staff nurse] and staff of medical records department. A structured, open-ended, self-administered questionnaire was developed based on adaptation and review of previous literature on the subject. It was later pre-tested for content validity before the commencement of data collection.

Data collection

For convenience, two hundred (200) questionnaires were distributed to the respondents at the facilities based on convenience sampling. The health workers were approached for consent to be involved in the study after briefing them about the objectives of the study. The questionnaires were distributed to the consented respondents only at each of the study settings and were retrieved within four weeks. Data regarding the socio-demographic attributes and working experience of the respondents were collected. Other information included were average referrals made at the facility, prior knowledge on referral, facilities that referred/accept the patients, self-referrals, reasons for referrals, prior communication when giving referrals and efforts by healthcare workers to discourage self-referrals.

Data analysis

The data were analysed using statistical software (IBM SPSS Statistics version 23.0). The results of the descriptive analysis were presented as frequency (percentages) for the categorical variables. The differences among categorical variables were determined using Chi-Square as appropriate.

Ethical approval

Permission to conduct the study was granted by the institutions' ethics committees. Informed consents were sought from all respondents prior to questionnaire administration.

Results

A total of 165 questionnaires were completed and returned, with a response rate of 82.5%. Of the 165 respondents, 114 (69.1%) were from tertiary healthcare facilities and 51 (30.1%) from the secondary healthcare centres. From the main results; 27.5% and 18.4% of the respondents from secondary and tertiary healthcare facilities had 16 years and above post qualification experience respectively. The average number of referrals made at secondary healthcare facilities was sixteen referrals per month. [Table 1] indicates the socio-demographic characteristics of the respondents.

Prior knowledge of referrals

Of the 165 respondents, 147 [89.0%] had adequate knowledge on patients' referrals in their healthcare facilities. 42 [47.2%] respondents from secondary healthcare and 105 [52.8%] from tertiary healthcare facilities.

	Tertiary Healthcare Facility n = 114 n (%)	Secondary Healthcare Facility n = 51 n (%)
Gender		
Male	62 (54.4)	19 (37.3)
Female	52 (45.6)	32 (62.3)
Specialization		
Medical Doctor	23 (26.2)	62 (54.4)
Matron	8 (7.0)	13 (11.4)
Staff Nurse	3 (2.6)	18 (15.8)
Record clerk	8 (7.0)	16 (14.0)
Others*	9 (7.9)	5 (4.4)

Table 1: *Demography and characteristics of the respondents (n = 165).*

Facilities that give and receive referrals and reasons for the referrals

[Table 2] demonstrates the healthcare facilities that advise on and receive referrals. Tertiary healthcare facilities received more referrals compared to secondary. However, there was no significant difference between facilities that give referrals. Obtaining more detailed information on the nature of patients' illness was the most popular reason for giving referrals, while protection against uncertainty was the least common reason. Other reasons are shown in [Table 2].

Variables	(%)	P value*
Giving referrals		
Primary Healthcare Centres	20.2	0.0776
Secondary Healthcare Centres	31.6	
Receive referrals		
Tertiary Healthcare facilities	70.6	< 0.001
Secondary Healthcare facilities	17.6	
Private Hospitals	3.9	
Main reasons for giving referrals		
To obtain more detailed information about the case	26.0	0.002
Patients requested for the referral	13.0	
To exclude more serious disease condition	13.0	
To get information on treatment options	11.1	
As a protection against uncertainty**	9.3	

Table 2: *Facilities that give, receive referrals and the reasons for the referral.*

*Chi-Square goodness of fit, $p < 0.05$. **When the doubt diagnosis/management options

Acceptance of Self-Referred Patients at the Healthcare facility

Of the respondents, 83.0% indicated that they received self-referred patients in their centre. While, 11.0% responded that they did not, and 5.0% of the respondents were not sure they received self-referred patients in their centre.

Efforts Made to Ensure Self-Referred Patient Follow Appropriate Referral Channels

An attempt was made to determine if effort was made at the healthcare facilities to discourage self-referrals and ensure that patients followed due process in the future referrals. Of the respondents, 44.7% made efforts by enlightening the patients about the benefits of appropriate referral channels and implications of self-referrals. Of the respondents, 10.5% said they have educated the patients by way of writing the procedures of referral system on paper and handing it over to the patients. 10.5% of the respondents attempted to discourage self-referrals by demanding a referral note from self-referred patients. 15.9% of respondents made efforts by confirming the referral from the referring centre before accepting referrals.

Communications during referral system

Respondents (60.8%) indicated that referrals were communicated to the referral centres by letters and 11.8% through verbal communication. Whereas, respondents (74.6%) at the referral centres indicated the medium through which referrals were received was through letters, 17.5% filling a referral form and 7.0% verbally.

Availability of the referral forms at the healthcare facilities

The availability of the referral forms at healthcare facilities ensures adequate communication and documentation during referral system. Of the 52.9% respondents indicated that their centres had referral forms, 31.4% do not have referral forms available and 13.7% were not sure if their centres had or not.

Discussion

To the best of our knowledge and enquiry, the current study was the first to assess the referral system among public secondary and tertiary healthcare facilities in Kaduna metropolis. This was an attempt to determine the deficiencies in the system, implications, and recommendations for improvement. Public hospitals were used in the study because over 60% of the general population in the

north-western region of Nigeria seek health care from these facilities [11]. Findings from the current study indicated some level of deficiencies in all the components of an effective referral system [1]. This may be related to the poor healthcare system in the state and the country at large [12,13]. There was less referral received from the initiating facilities, the average monthly referrals received at each secondary healthcare facilities was sixteen, which is low compared to a similar study conducted in the south-west of Nigeria [14]. This is an indication of inadequacy in initiating referrals from the lower level of healthcare facilities because Kaduna state has a large number of PHC well distributed in the state, and based on the Nigeria's health system, the PHCs should be the major initiating facilities where most of the patients are to be referred to the secondary level of healthcare. This low referral may be explained by the health care-seeking behaviour of the majority of Nigerians of shunning the PHCs for managing simple illnesses [15].

At the receiving referral centres, a high proportion of referrals received at both facilities in the current study were self-referrals. This implied that the referrals were not properly initiated at the initiating centres and appropriate steps in making the referrals are not followed. [16] The high number of the self-referrals at these facilities may also be attributed to the common practice of healthcare seeking behavior of Nigerians of bypassing and underrating the level of care provided at the low-level tier of healthcare facilities in addition to the poor knowledge of the referral system among the public in the community [14,17,18].

Regarding the practicalities as a component of referral systems such as knowledge of referrals by the health workers, communications, availability of referral letters, reasons for referrals, and efforts to ensure that good referral procedure are followed [1]. In the current study, there was adequate knowledge of the referral system among the healthcare professionals at both levels of the health care facilities. However, this was not seemed to be translated to the improvement of the referral system at the facilities, as buttressed by a previous study which showed that when healthcare workers had an adequate knowledge of referrals, the average rate of referrals from other hospitals at a referral center should be improved [16]. In the current study, most of the healthcare facilities had referral forms available and the referrals received were through letter and verbal communications. The availability of the referral forms and the valid reasons for the few referrals in the current study indicated that there was an existing system for an effective referral to the healthcare centres.

The problem may be that of implementation, pressure from patients and the general healthcare-seeking behaviour. A previous study has identified inadequate communication and other barriers to communication as one of the greatest challenges of an effective referral system [19]. It has been shown that improving communication prior to referral visit reduces inappropriate referrals [20]. Regarding improving referrals at the facilities, the attempts made by the health workers towards ensuring appropriate referral procedures were followed, and in reversing the trend and practice of self-referrals is in line with a previous study on referral process improvement [21]. This will surely assist in improving adherence to referral protocols and thereby decongesting the referral centres and enhancing their provision of better healthcare services.

Findings from the current study indicate that the referral system at public secondary and tertiary healthcare facilities in Kaduna metropolis is inadequate. This may be a contributor to over-worked healthcare workers, overcrowding of secondary and tertiary hospitals with patients that bypassed the PHC where their conditions which are often uncomplicated in nature could have been attended to [9,10, 22-24]. The recent outcry of a wide physician to patient ratio of 1:4,000 reported in Kaduna state may also be attributed to the ineffective referral system at these facilities [25]. The overall outcomes of an ineffective referral are disruption of the linkages between levels of the healthcare system leading to the sub-optimal provision of healthcare services [26]. An effective referral system is thus needed in order to reduce hospital stay, healthcare expenditure, mortality and morbidity, and improvement of the quality of life and productivity [27].

Recommendations

The current study has the following implications: first, it has provided an empirical evidence to the healthcare policy makers in Kaduna about the status of the referral system in the state. This will assist them in providing measures that will improve effective referrals at all levels of health care facilities as well as improve public awareness on a referral system. Secondly, to the health workers at the

facilities to improve on educating patients about the implications of following good referral procedures, and to the public, the findings will improve their awareness and the need to adhere to the protocols of an effective referral system, and lastly, to the researchers, the study has provided gaps in knowledge for further research.

Limitations

The current study has some limitations; (i) PHC including private and faith-based facilities were excluded from the study. This may affect generalization of the study findings. Future studies should include these healthcare centres to give a more comprehensive knowledge of the referral system in Kaduna metropolis. Secondly, the data was collected only at hospitals within Kaduna metropolis, further studies should focus on hospitals in other parts of the state.

Conclusion

The referral system at secondary and tertiary healthcare facilities in Kaduna metropolis is inadequate. Intervention measures are therefore needed to increase awareness among patients and the public, and to ensure adherence to good referral procedure in the facilities for optimal service delivery and improvement of healthcare services.

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