Referral Decision-Making: An Assessment of Family Physicians in a Tertiary Hospital in Nigeria

Osahon Enabulele

Department of Family Medicine, University of Benin Teaching Hospital, Ugbowo, Benin City, Edo State, Nigeria.

Abstract

Background: Family physicians offer first contact, comprehensive and coordinated care to patients, and refer those in need of further specialist care to specialists in other clinical departments. This referral decision-making is dependent on certain factors which can lead to variations in the pattern of referrals with impact on the coping capacity of a health facility. This study sought to assess the factors influencing referral decision-makingof family physicians in a tertiary hospital in Nigeria.

Methodology: This was a descriptive cross-sectionalstudy of Family physicians in a tertiary hospital in Nigeria. It utilized a semi-structured, pre-tested self-administered questionnaire to obtain information on respondents' socio-demographic characteristics and factors that influenced respondents' referral decision. IBM SPSS Statistics version 22.0 (Chicago, IL, USA) statistical software was utilized for data analysis. A p-value of less than 0.05 was considered statistically significant.

Results: The most reported factors that influenced the clinical decision of respondents to refer patients were the need for definitive treatment or surgery, 35(94.6%) and the need for a specific investigation,26 (70.3%). The least stated factors were: to save cost, patient's gender, patient's attitude and poor adherence to treatment plan, with equal proportions of 2.7% respectively.

Conclusion: The most reported factors that influenced the clinical decision of respondents to refer patients were the need for definitive treatment or surgery, and the need for a specific investigation. Work status and the length of practice in Family medicine were also found to play a role in the clinical decision of respondents to refer a patient.

Keywords: Factors; Family physician; General Practice Clinic; Referral decision-making; UBTH.

Introduction

A referral is defined as a process in which a healthcare provider at one level of the healthcare system, with insufficient resources (such as equipment, skills and knowledge) to manage a clinical condition, seeks the assistance of a better resourced healthcare facility or healthcare provider at the same or higher level of the healthcare system, to assist in or take over the management of the patient's case.[1] It implies a transfer of responsibility for some aspect of the patient's care.[2]

In Nigeria, referrals do occur from one level of the healthcare system to another, usually from the primary level of care to the secondary and tertiary levels of care with more sophisticated facilities and specialist care services.[3] As it obtains in many countries,[4,5] primary care physicians in Nigeria such as Family physicians (with specialist/postgraduate training in family medicine), usually provide first contact care to patients and clients and therefore serve as the gateway for patients' entry to the various levels of the healthcare system.[3] Family physicians are therefore pivotal in the coordination of patient care in the Nigerian healthcare system, including the referral of

Corresponding Author: *Osahon Enabulele
Department of Family Medicine,University of Benin Teaching Hospital,
c/o P. O. BOX 10427, Ugbowo, Benin City,Edo State, Nigeria.
osahoncmavp@gmail.com

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patients to other physicians and specialists at other levels of the healthcare system.

Whereas the need for a definitive treatment or surgery, a specific investigation, establishment of a diagnosis, or request for advice on patient management, may be reasons for referral of a patient by a primary care physician,[6] various studies have found that aside the clinical basis for referrals, the decision to refer may be complex and influenced by an interplay of clinical and non-clinical factors relating to the primary care physician, the patient and the healthcare system/structure.[7,8] Such non-clinical factors may include the clinical experience and level of training received by the primary care physician,[9] patient's interest, request, pressure and expectations,[10,11] as well as the organization, capacity, and requirements of the healthcare system, including the accessibility of specialists and specialist care, and health insurance plans.[7,12]

Bearing in mind that the clinical decision to refer a patient has implications for health facility and health system management, particularly on account of its impact on the continuous care of patients, the cost and quality of patient care, as well as the coping capacity of a health facility and healthcare system, it is imperative to have a good understanding of the factors influencing the decision of family physicians in the study setting to refer patients to other health care providers/specialists at other levels of care. This study sought to assess the factors influencing the referral decision-making of family physicians in the family medicine department of a tertiary hospital in Nigeria. This was with a view to providing valuable insights into the factors influencing referral decision-making by family physicians, and hopefully, positively influence referral policies and guidelines, with improvement in the management and quality of referrals, as well as the quality of patient care and patient experience.

Methodology

A descriptive cross-sectional study was conducted amongst Family physicians in the Family medicine department of the University of Benin Teaching Hospital (UBTH); a public tertiary hospital located in Benin City, Edo State, Nigeria. The hospital was established on May 12, 1973 and is currently an 860-bed tertiary healthcare facility that offers both inpatient and outpatient services to people in the immediate and neighbouring communities and states of Nigeria, including primary care, emergency and

referral care services.[13] It is made up of several clinical departments, some of which include Family Medicine, Surgery, Obstetrics and Gynaecology, Internal Medicine, and Paediatrics.

The General Practice Clinic (GPC) where this study was undertaken, is situated within the Family medicine department of UBTH. The GPC is an outpatient clinic and a main avenue through which patients make their first contact with the hospital. In the General Practice Clinic, Family physicians offer first contact/primary medical care to patients in a comprehensive, continuous, coordinated and integrated manner, with patients in need of further specialist intervention referred to medical and dental consultants/specialists in other specialty departments of the hospital, such as Surgery, Internal Medicine, Paediatrics, Obstetrics and Gynaecology, Orthopaedics, ENT, and Ophthalmology.

A consecutive sampling technique was used to recruit the study participants who met the inclusion criteria and consented to participate. Only family physicians who practice in the GPC of UBTH, and who willingly consented to participate in the study, and had not previously participated in the pilot study were recruited for the study. A semi-structured pre-tested self-administered questionnaire was used to seek information on respondents' socio-demographic characteristics. Respondents were also asked to select from a list of 20 factors, those that influenced their clinical decision to refer patients (in order of importance). Data collection was done over a period of 14 working days in the month of May, 2020.

Informed consent was obtained before recruiting any participant. The purpose, procedure, and benefits of the study were clearly explained to the participants. They were informed that the study had no attendant adverse effects or risks. They were informed of their rights to refuse participation in the study, as well as their right to withdraw at any time during the study, without any negative consequences. All the data obtained from the participants were kept strictly confidential and used solely for the purpose of the research study. No name was included in the questionnaire, and the hardware for the storage of data was pass-worded to prevent unauthorized access.

Data analysis

All data obtained were checked for completeness and were coded, grouped and analysed using IBM SPSS Statistics version 22.0 (Chicago, IL, USA) statistical

software. Descriptive statistics was used to obtain frequencies and percentages of the categorical variables (such as gender, marital status, etc.) of the respondents, while mean and standard deviation were used to present continuous variables. Bi-variate analysis was done to determine association between categorical variables and factors influencing clinical decision to refer. Regression analyses was performed to identify the predictive factors influencing the Family physician's clinical decision to refer a patient. A p-value of less than 0.05 was considered statistically significant.

Results

Sociodemographic characteristics of Respondents

Thirty-seven (37) out of thirty-eight (38) family physicians in the Family medicine department of UBTH gave informed consent to participate in this study. Consultants accounted for 5 (13.5%) of the respondents, while Resident doctors constituted a higher proportion of the study participants. Majority of the participants were 35 years and above, 30(81.1%). A little less than one-third of the study participants, 12 (32.4%) had practiced for more than 5 years **(Table 1).**

Factors that influence respondents' decision to refer patients

A variety of factors were reported to influence the decision of respondents to refer patients. The most reported factors were the need for definitive treatment or surgery, 35(94.6%) and the need for a specific investigation, 26 (70.3%). The least stated factors were: to save cost, patient's gender, patient's attitude and poor adherence to treatment plan, with equal proportions of 2.7% respectively **(Table 2).**

The relationship between respondents' age group and factors that influence their decision to refer patients is shown in **table 3.** None of these relationships showed any statistical significance.

Table 4 shows the relationship between respondents' work status and factors that influence their decision to refer patients. All Consultants stated that they referred patients to specialists to take over management, while 45.5% and 47.6% of Senior residents and Junior residents stated this as a factor that influences their decision to refer patients (p=0.033). Compared to others, a significantly higher proportion of Consultants stated that they referred patients because it was the standard prescribed by the National Health Insurance Scheme and insurance firms (p=0.008).

Table 5 shows the relationship between respondents' length of practice in the family medicine department and factors that influence their decision to refer patients. A significantly higher proportion of respondents with over 5 years of practice stated that they referred patients to establish a diagnosis (75.0%), that it was the patient's legal right to be referred (66.7%) and because it was the standard prescribed by the National Health Insurance Scheme (NHIS) and insurance firms (41.7%) compared to those who had worked for 5years or less (40.0%, 28.0% and 8.0% respectively).

Table 1: Sociodemographic characteristics of Respondents

Variable	Frequency (n=37)	Percent (%)
Age group (years)		
<35	7	18.9
,,	30	81.1
Gender		
Male	17	45.9
Female	20	54.1
Work status		
Junior Resident	21	56.8
Senior Resident	11	29.7
Consultant	5	13.5
Length of practice (years)		
≤ 5	25	67.6
>5	12	32.4

Table 2: Factors that influence respondents' decision to refer patients

Variables	Frequency (N=37)	Percent (%)
Factors that influence respondents' decision to refer.	35	94.6
Need for definitive treatment or surgery	26	70.3
Need for a specific investigation	20	54.1
For the specialist to take over management of the patient	19	51.4
	19	51.4
Patient's preference/wish	15	40.5
To establish a diagnosis	15	40.5
Need for advice on management and backward referral	7	18.9
Patient's legal right to be referred	6	16.2
It is the standard prescribed by the *NHIS/Insurance firm	4	10.8
I lack knowledge to manage the patient	3	8.1
The socio-economic state of the patient	3	8.1
It is the hospital management's policy	2	5.4
Pressure from patients	2	5.4
To reassure the patient	2	5.4
Patient's age	2	5.4
Pressure from family members and relatives	1	2.7
Patient's faith/belief	1	2.7
To save cost	1	2.7
Patient's gender	1	2.7
Patient's attitude		
Poor adherence to treatment plan		

*NHIS: National Health Insurance Scheme.

Table 3: Distribution of factors that influence decision to refer patients by age group of respondents

Variables	Age group		p value
	<35years n=7(18.9)	≥35years n=30(81.1)	
Factors that influence respondents' decision to refer	6(85.7)	29(96.7)	0.249
Need for definitive treatment or surgery	5(71.4)	21(70.0)	0.941
Need for a specific investigation	5(71.4)	15(50.0)	0.306
To take over management of patient	3(42.9)	16(53.3)	0.628
Patient's preference/wish	5(71.4)	14(46.7)	0.238
To establish a diagnosis	2(28.6)	9(30.0)	0.941
Need for advice on management and backward referral	1(14.3)	14(46.7)	0.116
Patient's legal right to be referred	0(0.0)	7(23.3)	0.156
It is the standard prescribed by the	2(28.6)	4(13.3)	0.325
*NHIS/Insurance firm	0(0.0)	4(13.3)	0.306
I lack knowledge to manage the patient	1(14.3)	2(6.7)	0.506
The socio-economic state of the patient	0(0.0)	3(10.0)	0.383
It is the hospital management's policy	0(0.0)	2(6.7)	0.482
Pressure from patients	0(0.0)	2(6.7)	0.482
To reassure the patient	0(0.0)	2(6.7)	0.482
Patients age	0(0.0)	2(6.7)	0.482
Pressure from family members and relatives	0(0.0)	1(3.3)	0.624
Patients faith/belief	0(0.0)	1(3.3)	0.624
To save cost	0(0.0)	1(3.3)	0.624
Patients gender	0(0.0)	1(3.3)	0.624
Patients attitude			
Poor adherence to treatment plan			

*NHIS: National Health Insurance Scheme

Table 4: Distribution of factors that influence decision to refer patients by work status of respondents

Variables	Work status			Test statistic/p value
	Consultant n=5(13.5%)	Senior resident n=11(29.7%)	Junior Resident n=21(56.8%)	
Factors that influence respondents' decision to refer	5(100.0)	11(100.0)	19(90.5)	0.308
Need for definitive treatment or surgery	4(80.0)	8(72.7)	14(66.7)	1.000
Need for a specific investigation	5(100.0)	5(45.5)	10(47.6)	0.033*
To take over management of patient	3(60.0)	6(54.5)	10(47.6)	1.000
Patient's preference/wish	3(60.0)	7(63.6)	9(42.9)	0.581
To establish a diagnosis	2(40.0)	5(45.5)	4(19.0)	0.246
Need for advice on management and backward referral	3(0.0)	7(63.6)	5(23.8)	0.058
Patient's legal right to be referred	3(60.0)	3(27.3)	1(4.8)	0.008*
It is the standard prescribed by	1(20.0)	1(9.1)	4(19.0)	0.843
*NHIS/Insurance firm	1(20.0)	1(9.1)	2(9.5)	0.778
I lack knowledge to manage the patient	1(20.0)	1(9.1)	1(4.8)	0.532
The socio-economic state of the patient	0(0.0)	1(9.1)	2(9.5)	1.000
It is the hospital management's policy	1(20.0)	1(9.1)	0(0.0)	0.180
Pressure from patients	0(0.0)	1(9.1)	1(4.8)	1.000
To reassure the patient	0(0.0)	1(9.1)	1(4.8)	1.000
Patients age	1(20.0)	1(9.1)	0(0.0)	0.180
Pressure from family members and relatives	0(0.0)	1(9.1)	0(0.0)	0.432
Patients faith/belief	0(0.0)	1(9.1)	0(0.0)	0.432
To save cost	0(0.0)	0(0.0)	1(4.8)	1.000
Patients gender	0(0.0)	0(0.0)	1(4.8)	1.000
Patients attitude				
Poor adherence to treatment plan				

*NHIS: National Health Insurance Scheme

Table 5: Distribution of factors that influence decision to refer by respondents' length of practice of family medicine

Variables	Length of practice (years)		Test statistic/p value
	≤5years n=25(67.6)	>5years n=12(32.4)	
Factors that influence respondents' decision to refer	23(92.0)	12(100.0)	0.314
Need for definitive treatment or surgery	17(68.0)	9(75.0)	0.663
Need for a specific investigation	11(44.0)	9(75.0)	0.077
To take over management of patient	12(48.0)	7(58.3)	0.556
Patient's preference/wish	10(40.0)	9(75.0)	0.046*
To establish a diagnosis	6(24.0)	5(41.7)	0.271
Need for advice on management and backward referral	7(28.0)	8(66.7)	0.025*
Patient's legal right to be referred	2(8.0)	5(41.7)	0.014*
It is the standard prescribed by the	4(16.0)	2(16.7)	0.959
*NHIS/Insurance firm	2(8.0)	2(16.7)	0.427
I lack knowledge to manage the patient	1(4.0)	2(16.7)	0.186
The socio-economic state of the patient	2(8.0)	1(8.3)	0.972
It is the hospital management's policy	0(0.0)	2(16.7)	0.099
Pressure from patients	1(4.0)	1(8.3)	0.585
To reassure the patient	1(4.0)	1(8.3)	0.585
Patients age	0(0.0)	2(16.7)	0.099
Pressure from family members and relatives	0(0.0)	1(8.3)	0.143
Patients faith/belief	0(0.0)	1(8.3)	0.143
To save cost	1(4.0)	0(0.0)	1.000
Patients gender	1(4.0)	0(0.0)	1.000
Patients attitude			
Poor adherence to treatment plan			

*NHIS: National Health Insurance Scheme

Discussion

This study assessed the factors influencing the referral decision-making of family physicians in the family medicine department of a tertiary hospital in Nigeria. A referral process is a complex activity comprising of the referral decision and referral communication.[14] The referral decision entails the referral indication, service identification, and selection of the receiving physician. Tzartzas et al opined that the decision-making process can be straight forward in some cases, however, in others, it can be multi-layered, multifactorial and therefore difficult to make, especially in complex cases.[15] The decision to refer a patient should be based on concerns about the treatment, the doctor-patient relationship, and the physicians themselves, ideally in that order. In this study, several factors influenced the respondents' decision to refer, the most prevalent factors being if the patient required a definitive treatment or surgery ,and if the patient required a specific investigation. This is in consonance with the findings reported in a previous study.[16]Some non-medical reasons were also stated including the patient's wish, reassurance of the patient, and the socioeconomic state of the patient, among others. This reflects the practice of patient-centred care which involves listening to, informing

and involving patients in their care.[17]Care should however be taken when granting a patient's request for referral as a study in the United States of America reported that over half of primary care physicians (PCPs) reported making unnecessary referrals to specialists in response to patients' requests.[18]

It was not surprising that all Consultants compared to the Resident doctors referred patients to specialists to take over management, and that a significantly higher proportion of respondents with over 5 years of practice referred patients to establish a diagnosis. It is expected that Consultant family physicians (who represent the apex cadre of the specialty of family medicine) and family physicians with over 5 years of practice in family medicine would have better expertise to investigate and diagnostically evaluate, as well as therapeutically manage and offer the best care to them at the primary care level, before considering referral to other specialists. It would therefore be expected that patients whose diagnosis they are unable to unravel or patients they are unable to manage would be referred to other specialists for management or to reach a diagnosis.

In the same vein, it was not surprising that the study found that a higher proportion of Consultants and respondents with over 5 years of practice referred patients because it was the standard prescribed by the National Health Insurance Scheme and insurance firms. Consultants and respondents with over 5 years of practice in the family medicine department are expected to be more experienced and therefore more conversant with the operating guidelines for patient management (including medical referrals) under Nigeria's National Health Insurance Scheme (NHIS),[19] as well as those of the operating insurance firms/Health Maintenance Organizations. They are therefore expected to adhere more to the operational guidelines for the care of patients enrolled under the scheme. One such guideline prescribes conditions for patient management at the primary care level as well as conditions for referral of a patient for specialist care.[20-23] This is irrespective of the personal wish or professional competence of a Consultant Family Physician. As long as the condition being managed by a Primary Care Physician/Family Physician is above that prescribed for primary care, such a patient is expected to be referred for specialist care.

Conclusion
In this study, various factors were reported to influence the decision of Family physicians to refer patients. The most reported factors were the need for definitive treatment or surgery, and the need for a specific investigation. Work status (whether a Consultant Family physician or Resident doctor) and the length of practice in Family medicine were also found to play a role in the clinical decision to refer a patient.

Limitations
The limited number of family physicians enrolled in this study and the fact that it was conducted in only one health facility in Nigeria, may make the study findings ungeneralizable to the population of family physicians in Nigeria.

Strengths
The study is the first of such studies to be conducted in the study setting. It has therefore provided important information and perspectives that would be useful in understanding the referral decision making process amongst family physicians in the study setting, and Nigeria in general.

Recommendations
This study recommends further multi-centre studies, with inclusion of more family physicians. The introduction of referral protocols by health facilities to help standardize the referral process, is also recommended.

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