Original Article

The Two-way Referral System: A Survey of Medical and Dental Consultants in a Tertiary Hospital in Nigeria

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Abstract

Background: Referral has been defined as a set of activities undertaken by a health care provider or facility in response to its inability to provide the necessary intervention to satisfy a patient's need. In a referral process, both Medical and Dental Consultants (Specialists) and Primary care physicians have essential roles to play. This study assessed the knowledge and practice of the two-way referral system by Medical and Dental Consultants in a tertiary hospital and their attitude towards it.

Methodology: This was a descriptive cross-sectional questionnaire-based study of Medical and Dental Consultants in a tertiary hospital. Data analysis was done using IBM SPSS Statistics version 21.0 (Chicago, IL, USA)statistical software, with Pearson's chi-square used to determine associations between variables. Statistical significance was set at a P-value of < 0.05.

Results: There were 118 respondents with 84 males and 34 females (M: F = 1:0.4). Though most of them had good knowledge of the two-way referral system, only 13.6% always referred the patient back to the primary care physician after specialist treatment. Of the respondents who never referred the patient back to the primary care physician, 44.4% stated there was no need for feedback to the primary care physician because they felt the patient became theirs after the initiation of a referral to them (specialist).

Conclusion: Though most of the Medical and Dental Consultants were aware of the two-way referral system and had good knowledge of it, their practice of the two-way referral system was poor.

Keywords: Family Physician; Two Way Referral; Primary Care; Consultants; Nigeria.

Introduction

Referral has been defined as a set of activities undertaken by a health care provider or facility in response to its inability to provide the necessary intervention to satisfy a patient's need.[1] It is done from one level of health care to another and involves not only direct patient care but support services such as transfer of patients from one health facility to another.[1]Majority of the health systems in the world are hierarchical, starting with primary care, to secondary care and then to tertiary care, with the delivery of health care in such hierarchical health systems dependent on the existence of a well-functioning referral system that permits the continuity of care across the different levels of care.[2] Furthermore, it has been postulated that a good referral system is the main link between the different levels of care.[3]

A referral is a two-way process of communication between primary care physicians and specialists, both of whom have an essential role to play, with the

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Access this article online

Quick Response Code:

Website: www.nigerianmedjournal.org

How to cite this article: Enabulele O. The Two-way Referral System: A Survey of Medical and Dental Consultants in a Tertiary Hospital in Nigeria. Niger Med J 2021; 62; (4):183-189.

primary care physician saddled with the responsibility of conveying a clear message about the reason(s) for referring a patient while the specialist is responsible for conveying clear feedback to the primary care physician on his/her evaluation of the patient's condition, and recommended plan of management for the continued care of the patient.[4,5,6,7]

Globally, it has been accepted that an effective referral system plays a crucial role in directing the distribution of patients, standardizing medical care procedures, controlling rising medical cost and maintaining the continuity, coordination and integration of medical care, among other benefits.[7]

Clinical governance of the health care system includes the effective management of the two-way referral system to improve the quality of patient care.[8] However, deficiencies in referral systems have been identified, particularly in most developing countries where the referral systems appear rudimentary and disorganized, thereby impacting negatively on equity, cost, and the quality of life of most primary care patients that require referral.[1,2,8,9,10]

The hospital where this study was conducted, is a tertiary hospital with various health personnel, including Medical and Dental Consultants in various specialities of medicine and dentistry who usually receive referrals from primary care physicians (including Family physicians).In the hospital's General Practice Clinic (GPC) (coordinated by the Family Medicine Department), Family Physicians and other primary care physicians offer comprehensive, continuous, coordinated and integrated care to patients, and refer those in need of further specialist intervention to medical and dental consultants in other speciality departments of the hospital, usually based on a realistic appreciation of their limitations.[11]It has been asserted that communication between Primary care physicians (such as General Medical Practitioners and Family Physicians) and Specialists is important. This ensures that the patients receive the right type of care at the right time/moment.[12,13] It also ensures optimal, cost-effective and quality care for the patients.[14,15,16,17,18]

In a previous study conducted among General and Private Medical practitioners, it was found that the majority of the study participants were dissatisfied with the handling of referrals by medical and dental consultants in public tertiary hospitals.[9] They claimed that they rarely received feedback (backward referrals) from the medical and dental consultants after completion of management of the patients referred to them. Since the effective practice of the two-way referral system is vital to the promotion of continued quality care of patients, and to the enhancement of Nigeria's healthcare delivery system, it is important to be aware of the nature of its practice by Medical and Dental Consultants (Specialists) in tertiary hospitals, including their attitude towards it.

On account of the paucity of studies assessing the practice of the two-way referral system amongst Medical and Dental Consultants (Specialists) in Nigeria, this study was aimed at assessing the knowledge and practice of the two-way referral system by Medical and Dental Consultants (Specialists) in a tertiary hospital in Nigeria, as well as their attitude towards it, with the hope that the outcome of the study will help to identify factors associated with the practice of the two-way referral system by Medical and Dental Consultants (Specialists).

Materials And Methods

This was a descriptive cross-sectionalstudy of Medical and Dental Consultants (Specialists) practising in a tertiary hospital in Nigeria (University of Benin Teaching Hospital). The study was conducted in May 2019, with the participants drawn from specialities which usually receive referrals from primary care physicians (including family physicians), such as General Surgery, Otorhinolaryngology, Mental health, Ophthalmology, Dentistry, Orthopaedics and Trauma, Internal medicine, Obstetrics and Gynaecology, and Paediatrics. Ethical clearance was obtained from the Hospital's Ethics and Research Committee (Protocol Number: ADM/E 22/A/VOL. VII/1326).The minimum sample size of participants to be recruited for the study was estimated to be 111. This was derived from the formula, nf = n/1+n/N, with allowance made for a 90% response rate.[19]Notwithstanding the calculated minimum sample size, the total population of consultants (135) were sent an informed consent form requesting their voluntary participation in the study. However, a total of 118 consenting medical and dental consultants agreed to participate in the study. A pre-tested self-administered semi-structured questionnaire was used to obtain relevant information from the respondents, such as Socio-demographic characteristics (Gender, Age, Marital status, Cadre/Status, Length of practice as a Consultant), awareness, knowledge and practice of the two-way

referral system, and attitude towards the two-way referral system. Data entry and analysis were done using the IBM SPSS Statistics version 21.0 (Chicago, IL, USA)statistical software. Categorical variables were described using frequency and percentages while continuous variables were described using mean and standard deviation. Pearson's chi-square was used to determine associations between categorical variables and outcomes such as knowledge of referral. Statistical significance was set at a P-value of < 0.05.

Results

Out of a total of 135 Medical and Dental Consultants who were eligible to participate in the study, 118 responded, thus giving a response rate of 87.4%. Of the 118 respondents, majority (93.2%) were married while 78.0% (n=92/118) were Honorary Consultants. There were 84 (71.2%) male respondents and 34 (28.8%) female respondents (M: F = 1:0.4). About a third (32.2%) of the respondents had practised as Consultants for 6-10 years while 14.4% had practised as Consultants for more than 20 years (Table 1). The majority (83.1%) of the respondents had their specialist training in Nigeria(Figure.1).Various specialities were represented with Internal Medicine making up 16.9% of the respondents (Table 2). The majority of the respondents were aware of the two-way referral system, with 39.0% moderately aware, 26.3% somewhat aware, and 17.8% extremely aware, and 6 (5.1%) were not at all aware (Figure 2).Of the 112 respondents who were aware of the two-way referral system, 42.0% became aware through their postgraduate medical curriculum (Fig.3).Most of the respondents had good knowledge of the two-way referral system, with about two-thirds (65.3%) knowing that the referral process was completed only when the specialist had referred the patient back to the primary care/referring physician with a backward referral letter. A majority (94.1%) of the respondents had received a referral from a primary care physician, with 66.9% receiving a referral within the last one month. A higher proportion (46.6%) of the respondents received referrals from primary care physicians weekly, 13.6% received daily, 10.2% received monthly, 3.4% received quarterly, and 5.9% received referrals every 6months.Concerning backward referral of the patient to the primary care physician after treatment by the specialist (accompanied with a backward referral letter), 15.3% stated that they had never referred the patient back to the primary care physician with a backward referral letter, while 13.6% always referred the patient back accompanied with a backward referral letter (Table 3).Of the respondents who never referred the patient back to the primary care physician, 16.6% stated they were not supposed to refer the patient back to the primary care physician, 5.6% stated they were not supposed to give any feedback to the primary care physician, 44.4% stated that there was no need for feedback to the primary care physician because they felt the patient became theirs after initiation of a referral to them (specialists),unless the patient decides to consult elsewhere. About 94.4% of the respondents said they did not refer back to the primary care physician because it is not the usual practice in the hospital. About 16.7% of the respondents stated that the referred patients preferred to remain in their specialist clinic. Similarly, 16.7% of the respondents stated that they did not refer back the patient because the primary care physician preferred that he/she (specialist) took over management of the patient without referring back. Respondents who felt it is not necessary to refer the patient back constituted about 5.6% of the respondents, while 33.3% of the respondents felt the patient needed only specialist care once the patient has been referred. Feedbacks were sent across to the referring primary care physician immediately after treating the patient by 28.8% of the respondents, 16.9% sent feedbacks after some days, 6.8% after some weeks, 2.5% after some months, and the remaining 45.0% of respondents had no specific period within which they sent feedbacks to the referring primary care physician.

Most (69.5%) of the respondents strongly agreed that the two-way referral system was relevant to the healthcare delivery system, 27.1% agreed, while 3.4% were undecided.

Above a quarter (28.8%) of the respondents were satisfied with the quality and content of referral letters received from primary care physicians, while 22.9% were undecided about the quality and content of the referral letter. Close to half (48.3%) of the respondents were not satisfied with the quality and content of referral letters received from primary care physicians (Fig. 4), with 59.6% of them claiming that the referral letters they received were incomplete, while 33.3% opined that the referral letters contained no specific issues or questions for resolution by the specialist, and 66.7% claimed that the quality of the referral letter was poor.

Only 6.8% of the respondents were satisfied with the operation of the two-way referral system in the

hospital, 66.9% of the respondents were not satisfied, and 26.3% were undecided.

On chi-square analysis, there was no statistically significant association between gender (p=0.54), consultant status (p=0.84), length of practice as a consultant (p=0.19), and awareness about the two-way referral system. There was no statistically significant association between gender (p=0.88), consultant status (p=0.87), length of practice as a consultant (p=0.80) and knowledge that the referral process was completed only when the specialist had referred the patient back to the primary care/referring physician with a backward referral letter (Table 4).There was no statistically significant association between gender (p=0.09), consultant status (p=0.39), length of practice as a consultant (p=0.78) and how often the respondents send a backward referral on chi-square analysis (Table 5).

Table 1: Socio-demographic characteristics of the Respondents

Characteristics	Frequency	Per cent
Gender		
Male	84	71.2
Female	34	28.8
Marital status		
Single	5	4.2
Married	110	93.2
Divorced	1	0.8
Widowed	2	1.7
Consultant status		
Hospital consultant	26	22.0
Honorary consultant	92	78.0
Length of practice as a consultant		
1-5 years	33	28.0
6-10 years	38	32.2
11-15 years	23	19.5
16-20 years	7	5.9
>20 years	17	14.4
Total	118	100.0

Table 2: Specialty of the respondents

Speciality	Frequency	Per cent
Surgery	16	13.6
Paediatrics	18	15.3
Obstetrics and Gynecology	19	16.1
Internal Medicine	20	16.9
Psychiatry	10	8.5
Dentistry	15	12.7
Otorhinolaryngology	7	5.9
Orthopaedics and Trauma	6	5.1
Total	118	100.0

Table 3: Frequency of sending backward referral among the respondents

Frequency of sending backward referral	Frequency	Per cent
Always	16	13.6
Often	24	20.3
Sometimes	15	12.7
Rarely	45	38.1
Never	18	15.3
Total	118	100.0

Table 4: Association between Gender, Consultant Status and Length of Practice as a Consultant with knowledge of when the referral process is said to be complete

Characteristics	knowledge of when the referral process is said to be complete			Total
	Correct response	Incorrect response	No response	
Gender				p=0.91
Male	54 (68.4%)	12 (15.2%)	13 (16.5%)	79 (100.0%)
Female	23 (69.7%)	4 (12.1%)	6 (18.2%)	33 (100.0%)
Consultant Status				p=0.27*
Hospital Consultant	15 (60.0%)	3 (12.0%)	7 (28.0%)	25 (100.0%)
Honorary Consultant	62 (71.3%)	13 (14.9%)	12 (13.8%)	87 (100.0%)
Length of Practice as a Consultant				p=0.85*
1-5years	21 (67.7%)	4 (12.9%)	6 (19.4%)	31 (100.0%)
6-10years	28 (77.8%)	3 (8.3%)	5 (13.9%)	36 (100.0%)
11-15years	14 (63.6%)	4 (18.2%)	4 (18.2%)	22 (100.0%)
16-20years	4 (57.1%)	1 (14.3%)	2 (28.6%)	7 (100.0%)
>20years	10 (62.5%)	4 (25.0%)	2 (12.5%)	16 (100.0%)
Total	77 (68.8%)	16 (14.3%)	19 (17.0%)	112 (100.0%)

*Fisher's Exact.

Table 5: Association between Gender, Consultant Status and Length of Practice as a Consultant and how often the respondents sent a backward referral

Characteristics	How often backward referral is sent					Total
	Always	Often	Sometimes	Rarely	Never	
Gender						p=0.09
Male	14 (16.7%)	14 (16.7%)	13 (15.5%)	33 (39.3%)	10 (11.9%)	84 (100.0%)
Female	2 (5.9%)	10 (29.4%)	2 (5.9%)	12 (35.3%)	8 (23.5%)	34 (100.0%)
Consultant Status						p=0.39
Hospital Consultant	1 (3.8%)	4 (15.4%)	4 (15.4%)	13 (50.0%)	4 (15.4%)	26 (100.0%)
Honorary Consultant	15 (16.3%)	20 (21.7%)	11 (12.0%)	32 (34.8%)	14 (15.2%)	92 (100.0%)
Length of Practice as a Consultant						p=0.78
1-5years	5 (15.2%)	7 (21.2%)	6 (18.2%)	10 (30.3%)	5 (15.2%)	33 (100.0%)
6-10years	4 (10.5%)	10 (26.3%)	3 (7.9%)	15 (39.5%)	6 (15.8%)	38 (100.0%)
11-15years	4 (17.4%)	1 (4.3%)	3 (13.0%)	11 (47.8%)	4 (17.4%)	23 (100.0%)
16-20years	2 (28.6%)	2 (28.6%)	0 (0.0%)	3 (42.9%)	0 (0.0%)	7 (100.0%)
>20years	1 (5.9%)	4 (23.5%)	3 (17.6%)	6 (35.3%)	3 (17.6%)	17 (100.0%)
Total	16 (13.6%)	24 (20.3%)	15 (12.7%)	45 (38.1%)	18 (15.3%)	118 (100.0%)

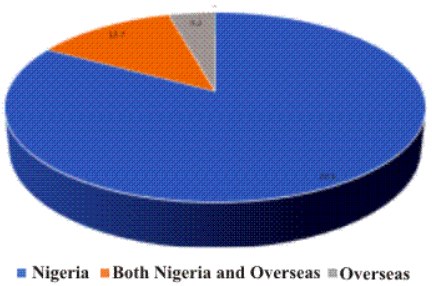

Figure 1: Place where specialist training was undertaken

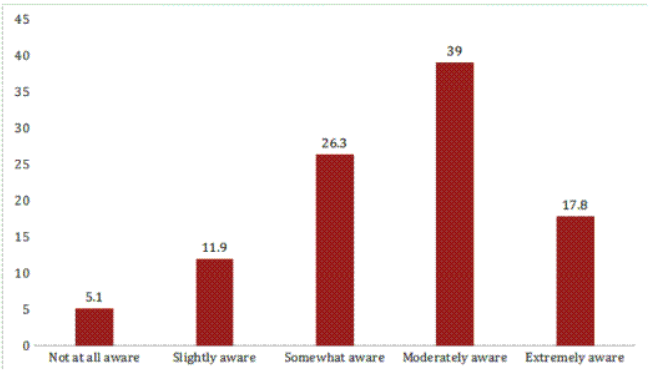

Figure 2: Awareness of a two-way referral system among Respondents

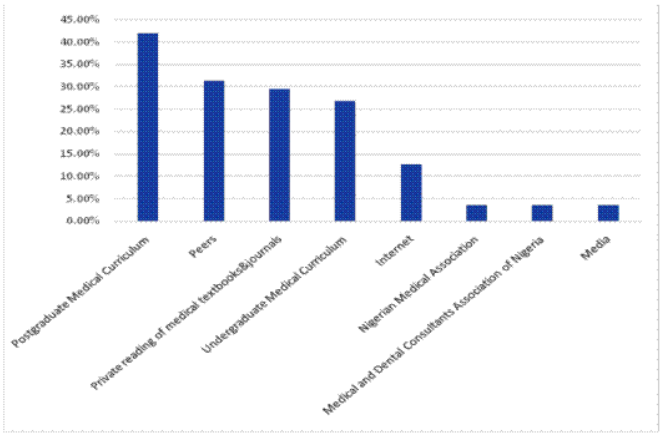

Figure 3: Source of Awareness

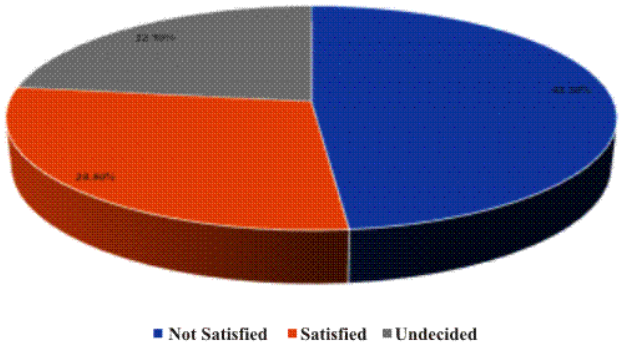

Figure 4: Satisfaction with the quality and content of referral letter received from primary care physicians

Discussion

Consultants as leaders of clinical care teams are expected to be familiar with various operational aspects of the health care system, including the two-way referral system. Similarly, they are expected to have received training courses on the two-way referral system at the undergraduate and postgraduate medical education levels. Additionally, Consultants usually receive referrals from other physicians, particularly primary care physicians, and hence ought to be aware and knowledgeable about the two-way referral system. Hence, the findings of the study that the majority of the participants were aware of the two-way referral system and knew when the referral process was completed, is not surprising. Most of the respondents became aware of the two-way referral system from their postgraduate medical curriculum with the proportion of those who got their information from their undergraduate medical curriculum being about half of those who became aware from their postgraduate medical curriculum. This is surprising because the two-way referral system is usually a foundational course to which medical students in Nigeria are expected to be exposed and trained. This finding is similar to the report of a previous study where only 13.6% of the study participants reported they became aware of the two-way referral system during their undergraduate medical training.[9]

The finding that only 13.6% of the respondents referred patients back to the primary care physician with an accompanying backward referral letter, is quite troubling. This is especially as it has been observed that communication between primary care physicians in primary care centres and specialists in hospitals is helpful for patient-care feedback with an attendant positive effect on referral and cooperation between primary-care physicians and specialists.[20] The rate of backward referral observed in this study is lower than the 55%,[13] 51%,[14] and 39%[21] recorded in previous studies.

This study finding of poor backward referral by specialists also corroborates the report of a previous study where it was observed that specialists failed to communicate their findings to the referring physician in a backward referral letter.[22,23] Nearly half of the respondents who never referred patients back to the primary care physician believed that it was not necessary to refer to the primary care physician. Furthermore, the respondents felt the patient became theirs from the point of referral to them. One reason adduced for the non-backwards referral was the perceived poor quality and content of the referral letters from primary care physicians. Another stated reason was the fact that it is not the usual practice in the hospital. This is an indication of the absence of a properly functioning referral system which has been observed to affect the feedback process.[24]This study finding is in agreement with a previous study that showed that about 44% of a cohort of primary care physicians reported never receiving feedback or backward referral letter from medical and dental consultants.[9]

This study further revealed that there was no statistically significant association between gender, Consultant status, length of practice as a Consultant, and awareness about the two-way referral system. This may partly be because all Consultants were likely to have been uniformly exposed to the two-way referral system during their undergraduate and postgraduate medical training. For the same reason, the absence of a statistically significant association between gender, consultant status, length of practice as a Consultant, and knowledge of when the referral process was completed, was not surprising. It was however surprising that there was no statistically significant association between length of practice as a Consultant and how often the respondents sent a backward referral. It is expected that Consultants with longer lengths of practice and therefore, more years of experience in the health care system, will be more appreciative of the significance of the two-way referral system and more committed to all aspects of its operation, including the transmission of a backward referral letter to the primary care physician.

This study highlights a serious gap in patient care that requires the urgent attention of the managers of the tertiary hospital in the study setting, and in Nigeria in general. The hospital managers need to urgently undertake a holistic review of the two-way referral system, to address identified factors and challenges militating against its effective and efficient practice. Efforts should be geared towards the training and retraining of health care providers/personnel on its usefulness. Both primary care physicians and specialists should be trained to recognize that referral is a bi-directional process that does not translate to the permanent transfer of responsibility for patient care to either party.[4]Additionally, they should be made to appreciate the fact that useful information provided by the specialist helps to improve the management of the referred patients, as well as improve the continuity of care.[4]Furthermore, standard referral forms, as well as appropriate monitoring and evaluation mechanisms, should be designed to enhance the practice of the two-way referral system.

Conclusion

The strong belief by most of the study participants that the two-way referral system is relevant to Nigeria's healthcare delivery system is indicative of its importance in advancing quality healthcare delivery.[9]Though most of the study participants were aware of the two-way referral system and had good knowledge of it, their practice of the two-way referral system was poor. This study, therefore, recommends a re-orientation of Medical and Dental Consultants on the tenets of the two-way referral system, including their obligation to refer patients back to the referring primary care physicians, along with an accompanying backward referral letter after completion of specialist care. In furtherance of this, awareness and enlightenment forums should be organized in tertiary hospitals to enlighten and refocus medical and dental consultants, primary care physicians, and other stakeholders, on their roles and obligations in the operation of the two-way referral system. This will hopefully improve the practice of the two-way referral system. This study further recommends effective integration of courses on the two-way referral system into the undergraduate medical curriculum, with medical students adequately exposed during their undergraduate family medicine rotations, to the essence and principles of the referral system. Similarly, courses on the referral system should be well integrated into the Continuous Medical Education (CME) programs for physicians and other health professionals. While further researches on the two-way referral system are recommended, this study recommends that the Electronic Health Record system should be deployed to facilitate referrals by healthcare providers at different levels of the healthcare system.

Limitations

The fact that this study was conducted in only one tertiary hospital in Nigeria may make its findings ungeneralizable to the population of Medical and Dental Consultants in Nigeria. The paucity of studies on the practice of the two-way referral system amongst Medical and Dental Consultants in Nigeria limited the comparative analysis of the study findings. However, the strength of this study is that it has contributed to knowledge about Medical and Dental Consultants' practice of the two-way referral system, including their attitude towards it.

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