Original Article

Knowledge and Practice of Primary Health Care Physicians about Referral System in Baghdad

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Abstract

Background: Referral system is one of the key elements in the primary health care (PHC), currently the Ministry of health is working on establishment and development of an effective referral system with incentives to the population to use PHC centers (PHCC) instead of secondary care, this includes monetary incentives and improvement of quality and quantity of services provided at PHC level. **Objective:** The aim is to assess the knowledge and practice of PHC physicians about the referral system. **Methodology:** A cross-sectional study with analytic elements was conducted from February 1, 2019 to June 30, 2019, in Baghdad, from both sides AlKarkh and AlRusafa, a convenient sample of 15 PHCC selected., data collection was carried out using a self-administered questionnaire which included questions about demographic characteristics of PHC physicians, qualification, and questions concerning their knowledge and practice about the referral system. **Results:** Total study group included 150 physicians. Overall knowledge of physicians about the referral system was good, Nearly all physicians (98%) knew its benefit, the results showed that all respondents used referral form (100%), and 94.7% wrote down the required information and followed the classical measures. The referral feedback was poor (36%). **Conclusion:** Most of the physicians had good knowledge and practice about the referral system. There was strong deficit in the training courses about referral system.

Keywords: Baghdad, knowledge, physicians, practice, referral system

Introduction

In health care, referral system can be defined as a process in which a health worker at a one level of the health system, having insufficient resources (drugs, equipment, skills) to manage a clinical condition, seeks the assistance of a better or differently resourced facility at the same or higher level to assist in, or take over the management of the client's case. Referral can be from lower level of care to higher level for effective management of condition or vice versa, for continuity of care and follow up.[1]

Referral system is referred to as a system because it comprises several parts, among such are: health system issues, initiating facility, referral practicalities, receiving facility, supervision and capacity building, and continuous quality improvement.[2] The reasons of referral either to establish a diagnosis or for treatment, support, and/or for advice. In some cases, the reason to refer is for a routine surgical procedure, or to seek additional services for the client as admission for management.[3]

Effective referral systems between the levels of health-care delivery represent a cornerstone in addressing clients' health needs efficiently and help to ensure people receive the best possible care closest to home. Optimal referring processes are crucial for the effectiveness, safety, and efficiency of medical care.[2,4]

Ideally, the Primary Health Care Centers (PHCC) are supposed to be the point of first contact of patients from which referral to the secondary and tertiary levels should follow a timely, smooth and organized process.[5] The health services in Iraq are provided through a network of public PHCC and hospitals where services are provided at very low charges.[6]

Objective of the study

To assess the knowledge and practice of primary health care (PHC) physicians about the referral system.

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Methodology

A descriptive, cross-sectional study with analytic element was conducted from February 1, 2019 to June 30, 2019, in Baghdad (AlKarkh and AlRusafa).

A convenient sample of 15 PHCC was selected. Study population includes all physicians working in the selected PHCCs who were available at the time of visit and consented to participate in the study. Data collection was carried out using a self-administered questionnaire (which included questions about demographic characteristics of PHC physicians, qualification, and questions concerning their knowledge and practice about the referral system).

The data were analyzed using the Statistical Package for the Social Sciences version 25 (SPSS version 25 Armonk, NY:IBM corp). Data were presented in tables and figures, simple measures of frequency, percentage, mean, standard deviation, and range (minimum–maximum values).

In order to evaluate the knowledge of studied sample about referral system, scoring method was used and obtained by adding up 1 for the correct answers and 0 for the incorrect, to the investigated variables in the questionnaire. Total number of questions concerning the knowledge about referral was 32, thus the score for knowledge of referral was ranged (0–32), a score <16 considered as poor, scores between (16 and 23) considered as fair and scores ≥24 good. While regarding practice 13 questions were used to determine the practice about referral, where the score of practice ranged (0–13), <7 score was considered as poor, while (7–9) considered as fair, and score of ≥10 was regarded as good.

The significance of association of different percentages (qualitative data) was tested using Pearson Chi-square test. Statistical significance was considered whenever the $P \leq 0.05$.

Results

The total number of study participants was 150. The distribution of physicians by demographic characteristics is shown in Table 1. Study participants' age was ranging from 26 to 63 years. The highest percentage of studied sample was found in the age group of 30–39 (55.3%). Majority of them were female (76.7%). Concerning qualification, there were 65 physician (43.3%) general practitioners, (40.7%) were family medicine specialists and (16%) were family medicine residents. In terms of duration, the postqualification experience of the physicians ranged from <2 to over 10 years in practice in PHCCs, majority 34% of the participants were (2–4) years and regard having training courses only 9.3% physician had specific courses about referral system at a variable times as shown in Table 1.

Knowledge about referral system and its definition among physicians are illustrated in Table 2, as the majority of physicians 86% knew definition of referral. Moreover, 98% knew its benefit, and almost all of them 149 (99.3%) recognized that PHCC is first level of care. Regarding the indication(s) for referral, this study showed that majority of physicians; namely, emergencies (96%) and factors or reasons that are diagnosis oriented and treatment oriented (96.7%, 93.3%), respectively.

Table 1: Distribution of physicians by demographic characteristics

Variables	*n* (%) (*n*=150)
Age (years)	
<30	17 (11.3)
30-39	83 (55.3)
40-49	29 (19.3)
≥50	21 (14.0)
Gender	
Male	35 (23.3)
Female	115 (76.7)
Qualification	
M.B.ch.B (GP)	65 (43.3)
Family medicine residents	24 (16.0)
Family medicine specialists	61 (40.7)
Years of experience in the PHCC	
<2	39 (26.0)
2-4	51 (34.0)
5-9	30 (20.0)
≥10	30 (20.0)
Have a specific training courses regarding referral system?	
Yes	14 (9.3)
No	136 (90.7)
If yes, when was the last training course?	
15 ago	5
13	1
10	5
5	2
3	1

PHCC: Primary health care center

Study result revealed good level of knowledge about referral system among participants, where 111 (74%) of physicians had good level and 39 (26%) of them had fair level, none of the physicians had poor level of knowledge about referral system.

Table 3 illustrates physicians practice about referral system, this study showed that all physicians use referral form (100%), and (94.7%) write down the required information and follow the classical measures. Regarding their reaction to self-requested referral (98.7%) of physicians said that they would explain and try to convince the patient who asked for self-referral to manage their case in PHCC. Concerning feedbacks 36% of physicians claimed that they sometimes receive referral feedback. Regarding records keeping 86% responded that this was the practice in their facility.

Study of practice of referral system by physicians in PHCCs, revealed that 133 (88.7%) of physicians with good practice and only 17 (11.3%) of physicians had fair level of practice. Moreover, none of them had poor level in practice referral system.

Table 2: The physician's responses to questions about referral system (n=150)

Knowledge about referral	Number correct answer, *n* (%)
Referral means	
Process of requesting another physician to examine a patient to obtain advice or management	129 (86.0)
Process of transferring patient to big hospitals (no)	78 (52.0)
Process of transferring not sharing responsibilities in patient care (no)	126 (84.0)
Process in which family physician has inadequate skills due to qualification and/or lesser facilities to manage a clinical case	111 (74.0)
The benefits of referral for the client	
Early detection of cases	138 (92.0)
Draw the attention of specialist	111 (74.0)
Avoid the loss from one hospital to another	131 (87.3)
The benefits of referral for the family physician	
Learning and training	122 (81.3)
Organizing health services	142 (94.7)
Improve image of PHCC	126 (84.0)
Enhance communication	136 (90.7)
The benefits of referral for the consultant in hospitals	
Save time and efforts	139 (92.7)
Gather data about patients	124 (82.7)
Improve quality of care	146 (98.0)
PHCC is the first level of care	149 (99.3)
The first level of referral is	
HCC (no)	76 (50.7)
General hospital	88 (58.7)
Specialized hospital (no)	136 (90.7)
Patient should attend to primary health centers before hospitals	149 (99.3)
Patient must have a referral letter before going to hospitals	146 (97.3)
Hospitals deal with severe/special cases only	92 (61.3)
Reasons for referral are	144 (96.0)
Emergencies	
Patient request (no)	124 (82.7)
Chronic illnesses needed admission and management	140 (93.3)
Cases needed to seek expert opinion regarding patient	138 (92.0)
Cases need specific facilities for investigation	145 (96.7)
It is necessary to notify the receiving centers before referring	102 (68.0)
It is necessary to have an ambulance to transport critical cases	140 (93.3)
Referral should always be received, or accepted without queries	113 (75.3)
Elimination of self-requested referral by	
Health education	149 (99.3)
Increase health awareness of people	142 (94.7)
Provision of better health services at PHC	147 (98.0)

PHCC: Primary health care center, HCC: Hepatocellular carcinoma, PHC: Primary health care

Table 4 shows the relation between demographic characteristics and referral records. it presented that 129 out of 150 participants claimed to keep record in their PHCCs 45% of them were family medicine specialists, 72.8% of them with >2 years of experience. Means higher the qualification and years of experience, more they realize importance of referral records in patient care and follow-up.

Discussion

The current study showed that majority of physicians had good knowledge about referral system, this is good and encouraging, its comparable with findings by Al-Erian *et al.* in Saudi Arabia.[7] and other studies in Nigeria and Ghana where participants demonstrated good knowledge about referral system.[2,8]

The current study showed that all physicians used referral form, and (94.7%) wrote down the required information and followed the required measures in referring patient, in line with other studies, in Saudi Arabia and Egypt[9,10] also in agreement with a study by the WHO (2008) that showed that the referral letter is the main cornerstone for the referral process and it is the only means of communication between general practitioners and specialists.

Most of physicians 86% claimed that they do keep record of referral systems in their facility. This result is comparable to study from Nigeria[11] where (87.7%) of

Table 3: Distribution of physicians according to their practice about referral system (*n*=150)

Practice of referral	*n* (%)
Refer patients by	
Referral form	150 (100.0)
Verbally (no)	138 (92.0)
The information you write down in referral form	
Clinical history of patients	139 (92.7)
Details of treatment given	138 (92.0)
Clinical findings/provisional or definitive diagnosis	124 (82.7)
Specific reason or indication justifying the referral	142 (94.7)
The measures you follow	
Fill in an outward referral form	142 (94.7)
Communication with receiving facility	74 (49.3)
Information to the client and their family ([reasons and importance of referral, risks of non-referral, how to get to the receiving facility - location and transport, who to see and what is likely to happen, follow-up on return])	135 (90.0)
Empathy - understanding of implications for client and family (overall fear, transportation and cost of treatment)	94 (62.7)
How participant react when patient asked for a referral and his condition is not indicated	
They won't refer him	138 (92.0)
They explain to him that his condition is manageable and does not need to go to hospital	148 (98.7)
They will ignore his request	141 (94.0)
The most common reasons for non-acceptance of a referred patient	
Inadequate information on referral forms or letters	59 (39.3)
Informally written	42 (28.0)
Illegible handwriting	46 (30.7)
Shortage of bed spaces, facilities, or services	105 (70.0)
Late referral	56 (37.3)
Improper diagnosis	37 (24.7)
Unskilled handling of patients	39 (26.0)

Table 4: The relation between demographic characteristics and use of referral records

	Yes, *n* (%)	No, *n* (%)
Age (years)		
<30	12 (9.3)	5 (23.8)
30-39	70 (54.3)	13 (61.9)
40-49	26 (20.2)	3 (14.3)
≥50	21 (16.3)	-
Gender		
Male	32 (24.8)	3 (14.3)
Female	97 (75.2)	18 (85.7)
Qualification (*P*=0.004)		
M.B.ch.B (GP)	49 (38.0)	16 (76.2)
FM resident	22 (17.1)	2 (9.5)
FM specialist	58 (45.0)	3 (14.3)
Years of experience in the PHCC (*P*=0.033*)		
<2	35 (27.1)	4 (19.0)
2-4	38 (29.5)	13 (61.9)
5-9	28 (21.7)	2 (9.5)
≥10	28 (21.7)	2 (9.5)
Have specific training courses regarding referral system		
Yes	14 (10.9)	-
No	115 (89.1)	21 (100.0)

P>0.05 (not significant for all) using Pearson Chi-square test at 0.05 level except for qualification and experiences. FM: Family medicine, PHCC: Primary health care center

the respondents saw this practice as necessary, but only 68 (59.6%) responded in the affirmative that this was the practice in their facility.

Concerning recipient of referral feedback, result was comparable to other studies in Saudi, Iran, and Nigeria,[9,12,13] where more than half of the participants concurred that they do not normally get feedback from facilities they refer to. The reason for such a low rate of feedback reports, compared with higher rates in some western countries could be the lack of awareness on the part of hospital consultants of the importance of communication with PHCCs in maintaining continuity of care and patient satisfaction[9] and might be due to the lack of referral letters from health workers which have been shown to influence rate of feedback of referred patients.[14]

The current study showed that 17.3% of the participants selected patient request as indication for referral, this result is similar to study by Omole *et al*., in which 18.1% of the respondents thought that referral should be at the request of patients rather than by the managing physician or health worker. This perspective (even among health workers) may in the long run contribute to the bypassing of lower levels of health care and the resultant increased turnout of self-referrals in tertiary health-care facilities; means overstretching of their services and facilities.[15]

Conclusion

The current work showed that most of the physicians had good knowledge and displayed good practice about the referral system, but the rate of feedback was low. Nearly all physicians ascertain the importance to activate referral system in our country for provision of health care. And recommended that efforts need to made by the various health stakeholders to improve communication among the various levels of health care. Besides, introduction and promotion of structure referral forms and implementation of referral protocols to boost the quality of the referral system in our country.

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Conflicts of interest

There are no conflicts of interest.

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