



Research Article

Practice & Opinion of Doctors in Hospitals toward Referral System in Iraq

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ABSTRACT

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Background: Primary Health care (PHC) is common to be the cornerstone of a person-centered health system. While the adoption of a well-function, two-way, and organized referral system is the mainstay in the development of an efficient healthcare delivery system.

Objective: to assess hospital doctor's practice and opinion toward referral system and to determine their commitment to its instructions and guidelines.

Subjects and Methods: A cross-sectional study (with analytic elements) was conducted in nine Iraqi governorates. Eight doctors from each health directorate, resulting in a total of 72 doctors using a specially designed questionnaire. Statistical analysis was done by using SPSS, the $P \leq 0.05$ was considered statistically significant.

Results: most of the total 72 physicians, 31(43.1%) aged 40-49years, 48(66.7%) were males, and 58(80.6%) were specialists., 58 doctors (80.6%) had no coordination with the PHC-doctors, the same percentage considered the current referral system is ineffective. PHC patients-crowded, doctors-shortage were the causes of inadequately filling PHC-part of the referral form. And PHC-hospital doctors-coordination had a significant association with their age, gender, and their thinking about adequate filling.

Conclusion: despite the importance of the referral system, half of the doctors disagreed about the current referral system's effectiveness; & most of them had no coordination with the PHC-doctors. PHC crowded/doctors' shortage the main causes of inadequate filling PHC part of referral-form.

Introduction

In most countries, the national health care system provides services for three tiers of health care; primary, secondary, and

tertiary. The three should work for clients' proper health care, and a good referral system is the main link between them. (1)

Good communication between the sectors becomes a crucial factor in the delivery of good quality health care. As modern healthcare systems become more complicated and more people need coordinated care from both sides of the primary/ secondary interface. (2)

Ideally, the primary health care centers (PHCC) are supposed to be the point of first contact for patients who are then referred from there to other levels of health care. Primary health care providers play a very important role in controlling the quality & cost of health care as a whole. They are the first gate to the health services and function as a gatekeeper and health care managers. They should focus on health promotion and prevention, keep the community healthy, and do the referral at the right time and to the right place/direction. (3)

By referral, a health worker transfers the responsibility of care temporarily or permanently to another health professional. (4)

The purpose of a referral is to allow two doctors with various backgrounds and specialties to consult with one another in order to solve a patient's issue and deliver the finest care possible at the ideal time and location. Referral has significant effects on patients, the healthcare system, and medical expenses. (5)

At present, little direct contact between primary care doctors and specialists, thus written communication in the form of referral and reply letters with its long history in the medical profession is the most common tool and an important aspect of quality care. (6)

In a high-quality referral, which is a data-intensive process, crucial elements of demographic and clinical data are transferred to other healthcare professionals along with clinical questions, including the reasons for the referral, a preliminary diagnosis, previous illnesses and treatments, prescriptions, drug sensitivities & habits. (7) PHC physician will gain from the opinions of hospital specialists. (8)

Incomplete referrals can result in care discontinuation, delayed diagnosis, inadequate follow-up plans, repeated and unnecessary tests, polypharmacy, and the inability of the receiving physician to recognize the need for referral, all of which lower the standard of care, increase medical errors, and drive up costs. (5) Although a limited number of patients will develop life-threatening complications, very few of these can be predicted. Therefore, the system of referring any of the patients to the next referral center needs to be improved. (9)

In any health care delivery system, an appropriate structure is essential to promote comprehensive scope, continuity, integration of components, and operational efficiency. Patients must be able to easily access health care workers and/or health centers in their communities. (10)

Thus, patients requiring further evaluation and treatment are referred to a tertiary health facility. However, the referral decision made by primary care physicians has a significant effect on the cost and quality of care that patients receive. (11)

Normally, if the initial problem cannot be managed at the level of PHC, the decision will be made to refer the patient to a specialist. All patients should be seen first by a primary health care physician who decides whether a referral to secondary care is necessary, except in an emergency. This avoids system inefficiencies such as disadvantaged groups suffering from a lack of specialist care due to

specialist doctors being overwhelmed by the inappropriate self-referrals. (12)

In order to effectively meet patients' health requirements, an efficient referral system must exist between the various levels of health care delivery. (13)

In Iraq; The health system has been adopted in 1958, the referral system is applied in a limited way to provide some health services, where preventive and therapeutic services are provided in the relevant preventive centers. (14)

The application of the referral system among health institutions has been at different stages of activation and inertia since the 1970s and 1980s until the 1990s. The unified health book system was applied to the patient in 1985 and was implemented in several health departments with the mechanism of reviewing the patient to institutions (Primary, secondary, tertiary) to be documented in the patient's health book and follow-up of the patient in all stages of his life, the work was frozen under a short period. (15, 16)

The Iraqi Ministry of Health (MOH) reactivated a referral system in late 2008. Most Primary Health Care (PHC) clinics (85%) had a referral system record, however (69%) did not have an electronic archive or family inventory, and (64%) said they do not have any follow-up mechanisms for the patients who need continuous care. (17)

The primary goal of any health system reform in Iraq should include strengthening the health care delivery and the referral system with special emphasis on changing the curative hospital-based system to a decentralized PHC-based system. (18) The purpose of referral services is to guarantee that patients receive cost-effective and high-quality management so at the proper level of the healthcare facility. Additionally, referrals act as a connection between primary, secondary, and tertiary care. (19) Clinical coordination is regarded as a priority in health policy as its absence might result in ineffective care and low quality. (20)

Patients visit an ever-expanding range of professionals in a variety of diverse venues due to rising medical specialization, quickening scientific and technical advancements, and the way health care is structured. (21) thus making clinical coordination difficult & jeopardizing the quality and efficiency of health care. (22)

The foundation of feedback mechanisms is professional communication and information sharing. (23) Through communication or information sharing between two or more people, mutual adjustment mechanisms accomplish therapeutic coordination in order to address the issue at the same level at which the information was generated. Last but not least, some methods, including doctor-to-doctor clinical case conferences and virtual consultations, integrate mutual adjustment processes with skills standardization through medical training. (24)

This study aims to assess referral system practice & hospitals doctor's opinion toward referral system and to determine commitment of them to referral system instructions and guidelines.

Subjects and Methods

A cross-sectional study with analytic elements was conducted in a sample from nine out of 15 Iraqi governorates after excluding the 3

North governorates in the Kurdistan region covering 9 general Health Directorates (Al-Karkh and al-Resafa (two-side of Baghdad), holy Karbala, Maysan, holy Al-Najaf, Kirkuk, Basrah, Al-Muthana and Ninawa).

Ethical issues:

The ethical and scientific approval was taken from the Iraqi Ministry of Health/ human resources and development center, all the nine health directorates, and each hospital manager. Also, the doctor's agreement to be enrolled in the study by oral consent was obtained before being interviewed by a tested questionnaire.

Sampling method: Two hospitals were selected randomly from each Health Directorate, and two doctors; who present in these counselling clinic at day of interviewer visit; were enrolled from four specialties (medical consultant ward, surgical consultant ward, gynecological/obstetric consultant ward, and pediatrics consultant ward).

The study was conducted from the first of February to the 30th of June 2019, with the data collecting taking place over a two-month reference period in March and April 2019. Eight medical professionals from each of the following health directorates: Al-Karkh, al-Resafa, holy Karbala, Maysan, holy Al-Najaf, Kirkuk, Basrah, and Al-Muthana, for a total of 72 medical professionals. branches.

Study Tool: A special questionnaire form was developed by the researchers and the opinion of four experts (two community physicians, and two family physicians) was taken into consideration. The questionnaire consisted of four parts. First part consists from 5 questions: Age, gender, specialization of the doctor, the governorate and the sector. The second part consists from three questions: "How many your duties in the counselling clinic per month averagely?", "How many patients per clinic you seen averagely?", "How many referred patient per all patients attending the counselling clinic in your duty averagely?". The third part consists from: "Did you asking each patients about if he/she have referral form?", "Did you respond to each referred forms by writing your notes in the hospital part? ", "Did you encourage referred patients to return to PHCs for follow up", "What is your opinion about coordination between PHC & hospital", "What is your think about causes of partial/not adequate referral form - PHCs doctor partial filling", "What is your opinion about the importance of hospital feedback", "What is your opinion about Effective current referral system". The fourth part was about doctor's suggestion

Pilot study: To assess the feasibility, time, cost, and effect size of the study, ten doctors who were not included in it underwent a pretest utilizing the study questionnaire as the pilot study's instrument (statistical variability). reliability testing = 6.1, and take four expert opinion taken; two community physician and two family physician. Every idea was taken into account.

Statistical analysis: SPSS version 23 was used for the analysis. Frequencies and percentages were used to express qualitative data. Mean and standard deviation were used to express quantitative data (SD). A p-value of less than 0.05 was regarded as statistically significant when using the Chi-Square test, yate correction or fisher exact test when it needed for statistical analysis.

Results

The mean age ± SD of the participants was 44.87 ± 8.52 and 31(43.1%) were at {40-49 years} age group, 48(66.7%) were males and 58(80.6%) were specialists, and most of the doctors 45(62.50%) have 3-6 duties in consultant clinics/month followed by 12(16.7%) have 7-10 duties, and 21(29.2%) had 26-50 Patient /clinic as shown in table 1.

Table 1: Distribution of studied doctors according to their age, gender, specialty degree, and load of work

		Frequency N=72	Percent %
Age (years)	30- 39	21	29.2
	40-49	31	43.1
	50-59	20	27.7
	Mean=44.87 SD= ±8.52		
Gender	Male	48	66.7
	Female	24	33.3
Specialty degree	Specialist	58	80.6
	Not specialist	14	19.4
Clinic duties / month (average) (3.78 ±1.778)	1-2	9	12.5
	3-6	45	62.5
	7-10	12	16.7
	>10	6	8.3
	≤ 25	19	26.4
Number of Patients/ clinic duty	26-50	21	29.2
	51-75	15	20.8
	≥ 76	17	23.6

Table 2: Distribution of studied doctors according to the referral response & their opinion about referral and feedback

		Frequency N=72	%
Asking about referral form	Every time	11	15.3
	Most time	14	19.5
	Some time	32	44.4
Referred patient/ all patients	Never	15	20.8
	Most of them	22	30.6
	Some of them	48	66.7
Respond to referred forms	Never	2	2.8
	All	24	33.3
	Most of them	14	19.5
encourage patients to return to PHCs for follow up	Some of them	15	20.8
	Never	19	26.4
	Yes	22	30.6
coordination between PHC & hospital	No	29	40.3
	Some time	21	29.2
	Yes	5	6.9
Referral form - PHCs doctor part filling	No	58	80.6
	Some time	9	12.5
	Adequate	11	15.3
Opinion about important of hospital feedback	Partial adequate	30	41.7
	Not adequate	31	43.1
	Important	64	88.9
Effective current referral system	Not important	3	4.2
	I don't know	5	6.9
	Strongly agreed	6	8.3
	Agreed	17	23.6
	Disagreed	36	50.0
	Strongly disagreed	13	18.1

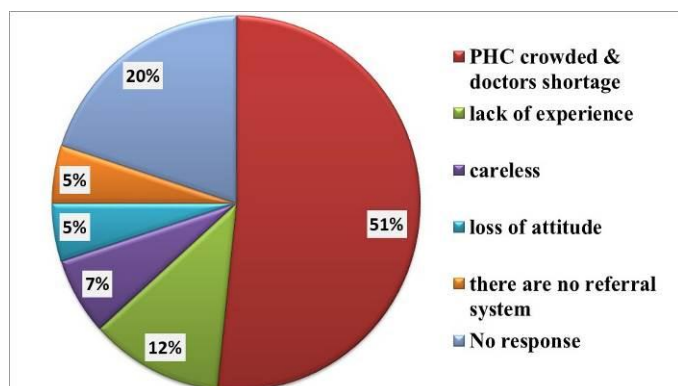


Figure 1: Distribution of Causes of “Partial or not Adequate Referral form PHCs Part (total=61)

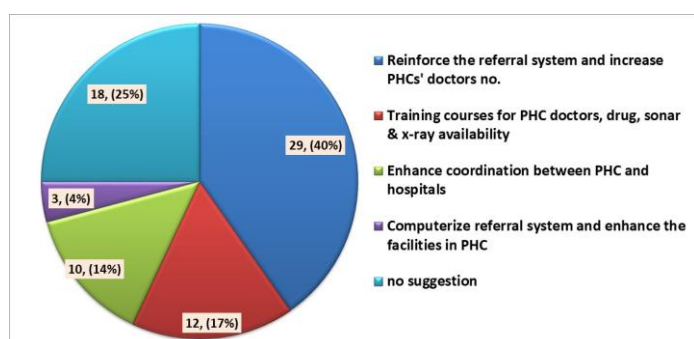


Figure 2: Distribution of Doctors Suggestion About the Referral System

Table 3: Association between PHC-hospital doctor's coordination and the doctors' characteristics:

		PHC-hospital doctor's coordination					P-value	
		yes		No		some time		
		N	%	N	%	N		%
Age	30-39	3	6.30	13	61.90	5	23.80	0.033*
	40-49	0	0.0	30	96.77	1	3.22	
	≥50	2	1.0	15	75.0	3	24.0	
Gender	male	2	4.17	43	89.58	3	6.25	0.023
	female	3	12.50	15	62.50	6	25.0	
specialty	specialist	4	7.27	48	82.76	6	10.34	0.534
	Not specialist	1	7.14	10	71.43	3	21.43	
Respond to PHCs referred forms	all	2	8.33	18	75.0	4	16.67	0.583*
	most of them	2	9.09	15	68.18	5	22.73	
filling PHC part in the referral form	adequate	4	36.364	4	36.364	3	27.272	0.001*
	partial adequate	0	0.0	25	83.33	5	16.67	
	not adequate	1	3.23	29	93.54	1	3.23	
Total 72(100%)		5	6.94	58	80.56	9	12.5	

* = yate correction

Only 32(44.4%) of the doctors were asking patients attending the clinic during their duty, about the PHCC's referral form, while, 22 (30.6%) of the doctors mentioned that most of the patient was referred, and 48(66.7) of doctors had some referred patient per their duties. According to the current study result, 40.3% of doctors did not encourage patients to return to PHCs for follow up, and most of them 58(80.6%) had no coordination with the PHC doctors, even

most of the referral form -PHCs doctor part filling were not adequate 31(43.1), or partial adequate 30(41.7%). Most participants 64(88.9%) consider the hospital referral feedback is important, and 36(50%) of them believed that current referral system is ineffective. As seen in table 2.

Table 4: Association between feedback PHCs referred forms & demographic characteristic:

		Feedback PHCs referred forms				Total	P-value
		All	Most	Some	Never		
Age\ years	30-39	5	7	2	7	21	0.318
	40-49	11	5	6	9	31	
	50-59	6	2	5	1	14	
	≥ 60	2	0	2	2	6	
Gender	Male	14	8	11	15	48	0.406
	Female	10	6	4	4	24	
	Surgery	5	2	4	7	18	
Department	Medicine	3	4	6	5	18	0.443
	Obstetric/Gynecologist	7	5	2	4	18	
	Pediatric	9	3	3	3	18	
specialty	Specialist	19	11	14	14	58	0.532
	Not specialist	5	3	1	5	14	

Table 5: Association between feedback PHCs referred forms and clinic features

		Feedback PHCs referred forms				Total	P-value
		All	Most	Some	Never		
Clinic duties per month	1-2	3	1	3	2	9	0.643
	3-6	15	9	9	12	45	
	7-10	5	1	3	3	12	
	≥11	1	3	0	2	6	
The patient was seen per clinic duty	1-2	3	1	3	2	9	0.187
	≤ 25	5	7	3	4	19	
	26-50	9	4	6	2	21	
	51- 75	4	1	4	6	15	
Asking each patient about the PHCCs referred form	≥ 76	6	2	2	7	17	0.055
	Every time	7	1	1	2	11	
	Most time	1	5	6	2	14	
	Sometime	10	7	6	9	32	
Referred patient/all patient	Never	6	1	2	6	15	< 0.001
	Most of them	4	8	8	2	22	
	Some of them	13	4	6	2	25	
	Rarely	7	2	1	13	23	
Advice patient to return to the PHC	Never	0	0	0	2	2	0.062
	Yes	8	6	2	6	22	
PHC – hospital coordination	No	7	2	9	11	29	0.015
	Sometime	9	6	4	2	21	
	Present	2	2	0	1	5	
Adequate filling PHC referral part	No present	18	7	15	18	58	0.048
	Sometime	4	5	0	0	9	
	Adequate	4	5	0	2	11	
Hospital feedback to PHCCs important	Partial adequate	7	7	9	7	30	0.399
	Not adequate	13	2	6	10	31	
	Important	22	13	13	16	64	
PHCCs important	No important	0	0	2	1	3	0.399
	I don't know	2	1	0	2	5	

As it appeared in figure (1) the most cause of partial/not adequate filling of PHC referral form part, was PHC crowded with patients and doctors' shortage 31(51%), followed by lack of experience, doctors careless, loss of attitude toward the referral system, and there are 12(20%) had no response to this question.

Nearly One-third of the doctors suggest reinforcing the referral system and increasing PHCs' doctors' number, the other 12 doctors suggest Training courses for PHC doctors to increase the experience,

availability of drug, sonar & x-ray, 10 doctors suggest the coordination between PHC and hospital which now very limited, others suggest computerize referral system like others countries, and 18 doctors give no suggestion. As shown in figure 2.

According to doctors' opinion about the presence of PHC-hospital doctors' coordination; had a significant association with their age, gender, and their thinking about Adequate filling PHC part in the referral form, but with no significant association with their specialty degree, and their Respond to PHCs referred forms as appeared in the table (3).

The study revealed a significant association between doctors applying feedback to PHCs referred-forms and the percentage of referred patient/all patients, presence of coordination between their hospitals and refereeing PHC, and Adequate filling PHC referral part, while there is no significance with doctors' age, gender, department, specialty, clinic duties per month, asking each patient about the PHCCs referred form, advice patient to return to the PHC and their opinion about the importance of hospital feedback to PHCs as shown in table (4) and (5).

Discussion

In Iraq, the healthcare system is divided into various tiers, from primary health care (PHC) to tertiary levels of care, which offer the most advanced services. The secondary and tertiary levels of care are expected to be referred to patients with non-urgent issues via letter. This referral letter describes the rationale for the referral and serves as a permission slip to allow the patient simple access to treatment by a specialist at the secondary or tertiary service level. Feedback should be communicated back to the primary level as soon as the issue for which a patient was referred is resolved or under control. In order to ensure that mutual referrals go well, the MOH supervision of referrals is essential. Although the government supports the implementation of mutual referrals, no specific incentives for good system performance have been identified. Similarly, the MOH has not developed any sanctions against hospitals that purposefully keep patients in stable conditions, so there is no incentive for the hospital to actively strengthen their coordination with PHC, according to a 2014 Albattal study conducted in Saudi Arabia. (4)

The most common cause of partial/not adequate filling of PHC Referral form part, was PHCC crowded with patients and doctor's shortage 31(51%). This is not surprising because, in Iraq, the physician rate is only 9.25 for each 10000 populations, (Total without Kurdistan region), according to an annular statistical report of the ministry of health 2020. (25), adding to the shift in distribution where the majority are working in hospitals rather than the PHC sector, further, this is agreed with Saadian study 2018. (1) One-third of the doctors suggest reinforcing the referral system and increasing PHC-doctors' number, the other 12 doctors suggest training courses for the PHC doctors to increase their experience, and also suggested the availability of drugs, sonar & x-ray, while 10 doctors suggest the coordination between PHC & hospital which is now very limited, others suggest computerize referral system like others countries, and 18 doctors give no suggestion. A systemic review study done in 2019, found the effectiveness of e-Referral Systems positive evidence includes reducing wait times and enhancing primary care-specialist communication. (26) And agreed with a Saudian study 2018. (1)

According to doctors' opinions about the current PHC-hospital doctor's coordination; had a significant association with their age,

gender, and their thinking about adequate filling PHC part in the referral form, it's part of good PHC-hospital doctors coordination, filling all parts of the referral form, to give good information, reporting all results of the investigations & imaging done to about the referred case, and decrease the time to redo the full examination and redo the investigations, also it will be logically respected more. Also, this is agreed with the Saudian study 2018, and another study based on the guidelines and systematic review. (1, 6)

While the presence of the PHC-hospital doctor's coordination; had no significant association with their specialty degree, and their response to PHCCs referred forms, which does not go with other studies done in Beijing, The PHC doctors recommended creating a distinct organization that coordinates referral to the hospital because a referral system is not adequately established. (27- 29).

The current study revealed a significant association between doctors applying feedback to PHCs referred-forms and the percentage of referred patients, presence of coordination between their hospitals and refereeing PHC, and adequate filling PHC referral part, while there is no significance with doctors' age, gender, department, specialty, clinic duties per month, a patient is seen per month, asking each patient about the PHCCs referred form, advice patient, to return to the PHC and their opinion about the importance of hospital feedback to PHCs. Mutual respect results in feedback to fully completed PHC referral forms, however a heavy workload may make it more likely that referral letters won't get a response, similar to a systemic review result that Inter-clinician collaboration is most likely the single most important factor to improve the letter quality and, the healthcare system. (30).

Conclusion

Despite the importance of the referral system, half of the doctors disagreed about the current referral system's effectiveness; & most of them had no coordination with the PHC-doctors. PHC patients-crowded/doctors-shortage the main causes of adequate filling PHC-part of referral-form. Based on these results it is recommended to reinforce the referral system. Improve coordination between PHCCs and hospitals and support and increase in numbers of PHCs' doctors.

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Conflict of Interest

No conflict of interest

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