Evaluation of Referral System Patterns in Azadi - Teaching Hospital/ Kirkuk

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Abstract:

Background: Referral system constitutes a key element of health system and one of the strategies for ensuring the best use of hospital resources and health care services..

Aim and objectives:

a) Causes behind of direct attendance of patients to hospital.
b) Find out the main reasons of patients referral to hospital.
c) Patients' opinion about the hospital services.
d) Assess consultants view about referral system.

Methods: A cross sectional study was carried out since 1st of March 2018 till end of September 2018. 1000 patients attending seven consultation units in Azadi teaching hospital were involved in the study. Anevaluation of main causes of direct attendance was done, review of the information on the referral form, patient satisfaction with referral was inquired and specialist doctors' evaluation of the referral was obtained.

Results: The rate of referral with referral form was (81%). Main cause of direct attendance was that patients don't trust the Primary health care center (PHCC) doctor. The provisional diagnosis,a reason for the referral and name of the referring doctor were absent or unclear on (94.6, 84.1 and 61.9 %) of referral forms..Patient satisfaction with the services of secondary health care facilities was (80.1%), and the highest rates of dissatisfaction were because of drug unavailability in hospitals. Specialist doctors considered (55.1%) of all referrals as inappropriate and the need for further treatment was the main reason for indicated referrals.

***Conclusion*:** The rate of patient's referral with referral form was high. The main cause of directly attending hospital with no referral form is that patients do not trust doctors in PHC level. Patients are generally satisfied with the services of secondary health care facilities. More than half of referred cases not need referral from the specialists' point of view.

Keywords: Referral form, Azadi hospital, Direct attendance, Kirkuk.

Introduction:

In most countries, the national health care system provides services for three levels ofhealth care; primary, secondary and tertiary. The three should work for proper health care of clients and a good referral system is the main link between them [(1)].

The primary health centers (PHC) are supposed to be the point of first contact of patients who are then referred from there to other levels of health care. PHC providers play a very important role in controlling the quality and cost of health care as whole [(2)].

Continuous collaboration between health care personnel at PHC level and those of referral facilities is very essential. This kind of coordination will be beneficial for the patients and the PHC doctor will benefit from the feedback of specialists in hospital [(3)].

In any health care delivery system an appropriate structure is essential to promote comprehensive scope, continuity, integration of component and operational efficiency. Patients must be able to easily access health care workers and/or health centers in their own community [4].

Excessive referral may result in unnecessary, possibly harmful intervention. on the other hand; under-referral may result in adverse outcomes or require intervention that is ultimately more expensive [5] .

If the initial problem cannot be managed, the decision will be made to refer the patient to a specialist. Except in an emergency, all patients should be seen first by a primary health care physician who decides whether a referral to secondary care is necessary This avoid system inefficiencies such as disadvantaged groups suffering from lack of specialist care due to specialist doctors being overwhelmed by the inappropriate self-referrals [6,7] .

Effective referral system between different levels of health care delivery represents a cornerstone in addressing patient's health needs efficiently [8] .

The goal of referral services are to ensure that the patients are dealt with at the appropriate level health facility, and receive cost effective and quality management. In addition, referral also serves to provide linkage between primary and secondary and tertiary care [9] .

The aims of the study:

1) Find out the Proportion of patients' attendance without referral form, and causes behind it.
2) Association between type of referral and some factors like: age, residency, gender, and type of consultation units.
3) Completeness of information on referral forms and main reasons of referral from (PHCC).
4) Patients and consultants view about referral and patients' satisfaction with hospital services.

Materials and methods:

The study protocol was approved by Research Ethics Committee of the Kirkuk health Directorate and verbal consent was obtained from all patients prior to participation in the study. A Cross sectional study was conducted in Azadi general teaching hospitals in Kirkuk city/ Iraq, for the period from 1st of March 2018 till end of September 2018. Two distinct groups were involved in the study. The first one was from patients attending 7 selected out-patient consultation units (which cover most of the referrals and considered more general than others) in the hospital either those holding referral forms for those referred from PHCC or those attending consultation units directly with no previous attendance to PHCC.

The second group was the specialist doctors working in the same consultation units that mentioned above (who were available at time of data collection). Data were obtained from patients through direct interview and though examining the referral form (if present) by their searchers, then opinion of the specialist doctor about the referral is inquired (regarding referred patients).The period of data collection was 6 months, data entry and analysis took 1month. Total period of study was 7months.Data were analyzed using the statistical package for social sciences (SPSS ver.23), Student's t-test was used to compare between two means, Chi-

square test of association was used to compare between proportions and to show the association between type of referral and some factors like: age, gender, residency, different consultation units.P value of ≤ 0.05 was considered as statistically significant.

Consultation unit	Number of patients included
Internal medicine	160
General surgery	140
Gynecology	140
Pediatrics	140
Dermatology	140
Otolaryngology	140
Rheumatology	140
(Total No = 1000)	

Results:

A total of 1000 patients were involved in the study. The mean (±SD) age was 30.1 ± 20.3 years with a male: female ratio of 0.7:1.2 and (88.9%) of sample resides in Kirkuk city (Table 1). The majority (No=810 (81%)) of patients were holding referral form as seen in (figure 1).There was significant association between type of referral and residency of patients (P = 0.042) , the rate of direct attendance among females (21.1%) was not significantly higher than the rate (15.7%) among males (P= 0.35) and there was significant association between type of referral and different age groups (P=.003), the rate of direct attendance was 25.9%in age group (30-39) and (25.4%) in 50 years and above, while in age (10-19) was 13.7% as shown in (Table 2).

A total of 190(19%) patients out of 1000 attended hospital directly without referral form, the main reasons for that are patients don't trust the PHC doctor (51.05%) while unavailability of (investigations, drugs) (25.78% , 19.47%) as shown in (Table 3). The evaluation of referral forms was showed absence/unclear names of (referring doctor, PHCC) (61.9%, 24.4%) and absence of (provisional diagnosis, reason and date of referring) (94.6%, 84.1% and 42.5%) from referral form (Table 4). Details of the health problems that prompted referral to hospital are shown in (Table 5). Patients were asked whether they knew why they were referred to the hospital shows that (67.2%) knows the reason for their referral for further consultation by the specialists. Regarding the patients' knowledge about the cause of their referral, more than half (54.8%) of patients referral was according to patients' request. The second main reason (22.6%) was for doing further investigations (Table 6). The majority (80.1%) of patients was satisfied when asked about Patient's satisfaction with hospital's management and dissatisfaction was mainly because of unavailability of drugs (68.6%) as shown in (Table 7). More than half of referrals (55.1%) were considered not indicated from specialist point of view, while the need for further treatment (46.2%) was the main cause for those regarded as indicated referrals as shown in (Table 8).There was statistically significant association between type of referral and different consultation units (P < 0.001) as shown in (Table 9).

Table (1): Distribution of study sample by Age, Gender and Residency.

Age in years	No.	% (N=1000)
<10	198	19.8
10-19	117	11.7
20-29	158	15.8
30-39	185	18.5
40-49	169	16.9
50+	173	17.3
Gender		
Male	388	38.8
Female	612	61.2
Residency		
Outside Kirkuk	111	11.1
Kirkuk city	889	88.9
Mean ±SD age = 30.1 ± 20.3 years		

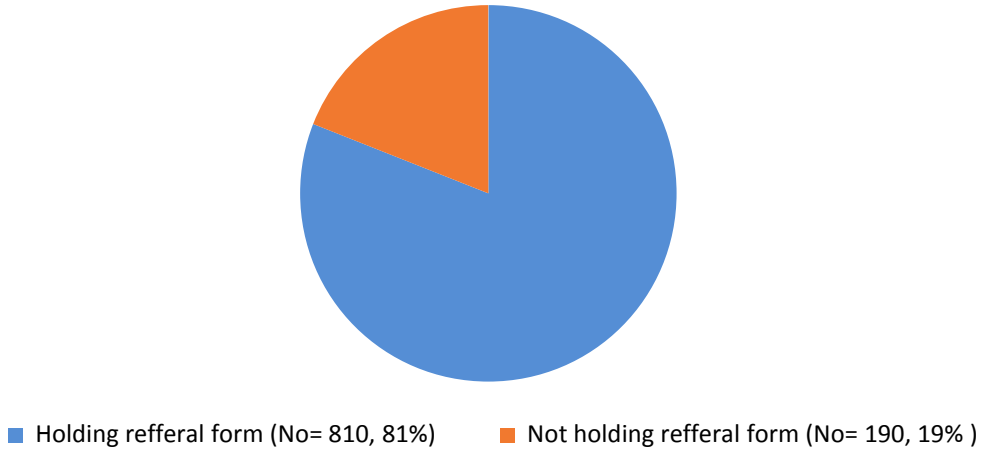

Figure (1): Study sample distribution according to possessing of referral form.

Table (2): Distribution of study sample according to socio – demographic character**.**

Socio demographic character		Type of referral				Total	%	P value
		Without referral form		With referral form				
		No.	%	No.	%			
Residency	Outside Kirkuk	29	26.1	82	73.9	111	100	0.042
	Inside Kirkuk	161	18.1	728	81.9	889	100	
Gender	Male	61	15.7	327	84.3	388	100	0.35
	Female	129	21.1	483	78.9	612	100	
Age group (Years)	< 10	29	14.6	169	85.4	198	100	0.003
	10 – 19	16	13.7	101	86.3	117	100	
	20 – 29	22	13.9	136	86.4	158	100	
	30 – 39	48	25.9	137	74.1	185	100	
	40 – 49	31	18.3	138	81.7	196	100	
	50+	44	25.4	129	74.6	173	100	

Table (3): Distribution of study sample who are not having referring for direct attendance.

Causes	Frequency	% (N=190)
Don't trust PHC doctor	97	51.05
Investigations not available	49	25.78
Drugs not available	37	19.47
PHCfar away from home	7	3.68

Table (4): Referral form assessment according to completeness of information.

Referral form parameter	Frequency	% (N=810)
Name of PHCC		
Absent	198	24.4
Present	612	75.6
Name of referring doctor		
Absent	501	61.9
Present	309	38.1
Date of referral		
Absent	344	42.5
Present	466	57.5
Reasons of referral		
Absent	681	84.1
Present	129	15.9
Provisional diagnosis		
Absent	766	94.6
Present	44	5.4

Table (5): Referral form assessment according to the provisional diagnosis.

Provisional diagnosis	Frequency	%
Splenomegaly	1	2.4
Heart failure	1	2.4
Uncontrolled HT	5	11.9
Musculoskeletal complaint	2	4.8
Chest pain	2	4.8
Bilateral pitting edema	1	2.4
Abdominal mass	2	4.8
Gall stone	2	4.8
Acute bronchitis	2	4.8
Goiter	1	2.4
Jaundice	1	2.4
Chest infection	3	7.1
Acne	2	4.8
Multiple sebaceous cysts	1	2.4
Skin lesions	1	2.4
Urinary tract symptoms	2	4.8
Discoid eczema	1	2.4
Nasal polyp	1	2.4
Varicose veins	1	2.4
Epistaxis	1	2.4
Diarrhea/Vomiting	2	4.8
Allergic rhinitis	1	2.4
Headache	1	2.4
Gynecologic problems	3	7.1
Right side sciatica	1	2.4
Foreign body in ear	1	2.4
Total	42	100.0

Table 6. Distribution of study Patients regarding their knowledge about the causes of referring.

Know the reason for referring	Frequency	% (N=810)
No	266	32.8
Yes	544	67.2
Reasons of referral to hospital		% (N=544)
Patient's request	298	54.8
Further investigation	123	22.6
Specialists consultation	67	12.3
Further treatment	56	10.3

Table (7): Patient's satisfaction and causes of dissatisfaction.

Satisfied	Frequency	% (N=973)
No	194	19.9
Yes	779	80.1
Causes of dissatisfaction		(N=194)
Unavailability of drugs	133	68.6
Dissatisfaction with doctors management	25	12.9
Operation not done	19	9.8
Unavailability of investigations	17	8.8
A total of 973 patients out of 1000 responded when asked about Patient's satisfaction with hospital's management		

Table 8.Distribution of study Specialist's opinion about the referral.

Need for referral	Frequency	% (N=810)
No	446	55.1
Yes	364	44.9
Indication for referring	(N=364)	
	Yes (%)	No (%)
Further treatment	168 (46.2)	196 (53.8)
Further investigation	104 (28.6)	260 (71.4)
Needs admission	94 (25.8)	270 (74.2)

Table 9.Study sample distribution according to consultation units in relation to types of referral.

Consultation unit	Type of referral				Total(N=1000)	P value
	Without referral form		With referral form			
	No.	%	No.	%		
Medicine	67	41.9	93	58.1	160	< 0.001
Surgery	17	12.1	123	87.9	140	
Pediatric	5	3.6	135	96.4	140	
Dermatology	40	28.6	100	71.4	140	
Otolaryngology	29	20.7	111	79.3	140	
Gynecology	32	22.9	108	77.1	140	
Rheumatology	0	0	140	100	140	
Total	190	19	810	81	1000	

Discussion:

Regarding the age of the patients, those bellow 40 years were attending hospital more often than other age groups. Simply because the number of young people in the community is more than older people, this approximate with the results of a study done in Ethiopia showed that ages between (15-30) attended more than the others [10] . Regarding the association between type of referral and age group it is shown that in this study the age group below 30

were attending hospitals holding referral form, while those above 30 years attend directly without referral form. Similar study done in Switzerland shows those patients who attends directly was older age 60-79 [11] .

Regarding the gender, this study showed that females were attending secondary health facilities more often than males. it was similar to another study done in Ghana which reported females more than males [12] .

Regarding the association between the residency and type of referral, it was shown that direct attendance was more from outside Kirkuk than from Kirkuk city. It means that people residing outside Kirkuk were less oriented with referral process. In contrast, study done in Erbil which shows that, the higher preponderance of direct attendance from the Erbil city [13].

One of the issues of this study is to clear out the main reasons for direct attendance; the main cause was that the patient did not trust the doctor of PHC units, unavailability of investigations as the second main cause. The same point in both referred patients & direct attendant, reflect that how much is important the availability of different investigations in PHC level. Similar reasons for direct attendance was shown in study done in Erbil [14].

The reason for referral was not seen on (84.1%) of referral forms, which gives the impression that unnecessary referrals are more common. On the other hand referral form that did contain provisional diagnosis was given in only (5.4%). Similar study done in Baghdad showed same results [15] .

The referred patients in this study were asked whether they knew why they were referred, 67.2% knew the cause of their referral. Patient's request and being referred for doing further investigations considered as the main reasons for referral, which reflects what the PHCC doctor who referred the patients had told them and also reflects how much patient insist on referral to hospital. Study done in Nigeria showed the similar reasons for referral [16] .

We were able to assess patient's satisfaction with hospital service in 973 patients out of thousand. Where most of them was satisfied (80.1%). Similar studies done in Karbala and India showed similar results of patient's satisfaction [17, 18] .

The main cause of patients' dissatisfaction in this study was drug unavailability in hospitals that patient should buy it from private pharmacies with high costs. Study done in Ethiopia which shows the same mean reason of dissatisfaction [19] .

The specialist's doctor opinion about whether the referral was indicated or not. More than half of the referred cases (55.1%) were considered not need for the referral and the patient could have been managed at the PHCC. This rate is high and reflects that a large burden is put on the consultation units in secondary health care level compared to study done in Netherlands showed that about (20%) was the rate of not indicated referrals that could have been avoided [20].

Regarding those referred to hospital, the need for further treatment (46.2%) was the main cause as indicated referrals from specialists' point of view, while need doing further investigations and need admission were (28.6 , 25.8 %). This is as most PHCCs are only capable of doing basic investigations and lack many important one. In contrast, study done in Netherlands which shows that, the main reasons for referring were to

screening unclear pathology and to confirm disease (43.3 , 21.5 %) [20] .
The association between the type of referral and different consultation units. The least rate of referral (58.1%) with referral form was in internal medicine unit while in Rheumatology (100%) of cases were referred with referral form, and it disagree with that (28%) of the patients seen by a physical therapist came by direct access with no referral form in the Netherlands[21] .

Conclusions:

The rate of direct referral to the hospital with no referral form is (19%).The main cause of directly attending secondary unit with no referral is that patients do not trust doctors in PHC level. The referral form often lacks essential information, such as the name of referring doctor, provisional diagnosis and the reason for referral by PHCC doctor. Patients are generally satisfied with the services of secondary health care facilities. Unavailability of drugs in hospital is the main reason of dissatisfaction. More than half of referred cases not need referral from the specialists' point of view. The need for further treatment is the main cause for those referrals which were considered indicated.

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