

Rate of referral from primary health care to secondary health care among governmental hospitals in Taif governorate, KSA

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Received June 19, 2015. Accepted June 26, 2015

Abstract

Background: Referral system is facing difficulties worldwide. In Saudi Arabia, particularly, our doctors always complain of referral system.

Objective: To measure the referral rate from primary- to secondary health-care services, evaluate secondary health-care opinion regarding referral from primary care, and measure the feedback rate from secondary health-care physicians.

Materials and Methods: A cross-sectional approach was carried out, which included currently working doctors in a governmental secondary health-care hospital who received referral from primary-care centers in Taif, in addition to a manager of each primary health care center (PHCC) inside the Taif area. Data were collected by using two forms. The first form was a questionnaire that collected data from physicians. It included personal data of the doctors and doctors' judgment regarding referral process in PHCC and what can improve the quality of referral system and make it more useful to the patients. The second form was a checklist used to collect data from managers of involved PHCC inside the Taif area.

Result: The study included 112 physicians working in secondary health-care governmental hospitals in Taif. Their age ranged between 25 and 60 years with a mean of 40.4 years and standard deviation of 9.2 years. Men represented 70.5% of them. The commonest reported reasons for referral from PHCCs were seeking specialized treatment (42.9%), more assessment of patients (40.1%), and diagnosis of difficult cases (21.4%). Almost three quarters of them (77.7%) considered referring notes to be more informative if the referring doctor was a family physician. More than half of the physicians (52.5%) reported that they never issued feedback notes to PHCCs regarding referred cases, whereas 20.8% of them reported that they always issued such notes. Older physicians (>50 years) provided feedback referral notes either always or sometimes at a significantly higher rate than younger physicians (76.5% versus 50% among those aged between 41 and 50 years and 30.8% among those aged 40 years or younger). The difference was statistically significant.

Conclusion: This study highlighted some of the inadequacies in the effectiveness of the referral system in a PHCC from the perspective of physicians working in governmental secondary-care hospitals in Taif and suggested various ways of dealing with them.

KEYWORDS: Referral, primary health care, secondary health care, government hospitals, Saudi Arabia

Access this article online

Website: <http://www.ijmsph.com>

DOI: 10.5455/ijmsph.2015.19062015302

Quick Response Code:



Introduction

Among important daily activity that ensure providing adequate medical care to patients is the referral from primary care to hospitals. In order to improve the quality of patient care, building and improving a sound referral system should be the main objective.^[1]

Referral is a two-way communication process between primary-care physicians and specialists in hospitals, both of

whom have an important role to play. It is the responsibility of the primary-care physician to convey a clear message about the need and reason(s) for referring a patient. On the other hand, the specialist in a hospital is responsible for conveying a clear feedback on his evaluation of the patient's condition and a plan of management. However, problems in the referral process arise from primary care or hospitals when the primary-care physician fails to clarify the reason(s) for referral^[2] or conveys inappropriate or incomplete information.^[3] The specialist may also not address the physician's reason for referral or may fail to communicate his finding to the referring physician.^[4]

Several authors have stressed the importance of good referral letters as the best mode of transmitting information to promote the understanding of a problem or patient. This not only improves management but also aids the appropriate use of resources.^[5,6]

In Saudi Arabia, the referral system given to primary-care physicians is based on clear guidelines detailing the referral process. This includes the use of a predesigned, standardized referral form with important, relevant, clinical, and social information. However, a small-scale study on referral letters in two health centers in Riyadh have shown the inadequacy of both referral letters and the feedback received from specialists.^[7] Thus, there is a need to explore further the practices within the referral system in Saudi Arabia further.

Referral system is facing difficulties worldwide. In Saudi Arabia, particularly, our doctors always complain of referral system.

In order to provide a comprehensive and integrated health service for the people of Saudi Arabia, the Ministry of Health (MOH) has introduced a referral system as one of its strategies to make the best use of hospitals and primary health-care services.^[8] In this system, all the patients should first be seen by primary health-care physicians who decide whether a referral to secondary care is necessary. In other words, access to hospital care is through primary health care centres (PHCCs), except for emergency cases where patients can access the hospital directly through the accident and emergency departments.^[9] It was thought that implementing such a referral system would lead to a better cost-effective utilization of the health services.

The study aimed to evaluate the current referral system from primary health-care to secondary health-care center in Taif governorate, Kingdom of Saudi Arabia (KSA).

Materials and Methods

A cross-sectional approach was carried out to measure the rate of referral from PHCC to secondary health-care centers and to evaluate the current referral system in Taif governorate, KSA. This study was conducted in Taif city, which is located in the western province of Saudi Arabia. It was conducted in PHCCs and secondary health-care governmental hospitals belonging to the MOH in Taif governorate, KSA. There are 18 PHCCs and four governmental secondary-care hospitals belonging to MOH inside Taif city.

The study included presently working doctors in a governmental secondary health-care hospital who received referral from primary care centers in Taif. Both genders were invited to participate in the study. The manager of each PHCC inside the Taif area were also invited. Those who refused to participate were excluded. (Nine managers accepted to participate in the study; seven of them gave complete data.)

The sample size was calculated using Raosoft calculator, online software. Assuming that the total number of physicians was 821, the rate of routine referral of patients from PHCCs to the secondary health-care centers was 5%.^[10] At 99% confidence interval, the sample size was 110 physicians. It was increased to 120 in order to compensate for non-response. Questionnaires were distributed to recruited doctors in secondary health-care clinics who received referral from PHCC. Sample size was equally distributed between the four governmental hospitals. Thus, 30 physicians were selected from each hospital using a nonprobability convenience sampling technique.

Data were collected by using two forms. The first form was a previously validated English questionnaire that has been used in a previous similar study.^[11] It was used to collect data from physicians. The questionnaire included the following:

1. Personal data of the doctors (e.g., age, gender, specialty, etc.).
2. Doctors' judgment regarding the referral process in PHCC.
3. What can improve the quality of referral system and make it more useful to the patients.

The second form was a checklist used to collect data from the managers of involved PHCC inside the Taif area.

The approval for the study was obtained from the Research and Ethics team, Al-Hada Armed Forces hospital, Taif.

Statistical Analysis

Data were collected and analyzed using SPSS software, version 20. Qualitative data were presented in the form of frequency and percentage, while quantitative data were presented in the form of range, mean, and standard deviation. The χ^2 -test was utilized to test for the association between the categorical variables. A p value <0.05 was considered significant.

Result

Personal Characteristics of Physicians

This study included 112 physicians working in secondary health-care governmental hospitals in Taif. Table 1 presents their personal characteristics. Their age ranged between 25 and 60 years with a mean of 40.4 years and standard deviation of 9.2 years. Men represented 70.5% of them. Majority of them were married (84%). Almost one-quarter of them were recruited from the medicine department (27.6%), followed by pediatrics (24.1%) and other departments (28.6%). Slightly more than half of them (50.9%) were

Table 1: Personal characteristics of physicians ($n=112$)

	Frequency	Percentage
Age (years)		
≤40	65	58
41–50	30	26.8
>50	17	15.2
Range	25–60	
Mean±SD	40.4 ± 9.2	
Gender		
Male	79	70.5
Female	33	29.5
Marital status		
Single	10	8.9
Married	94	84
Divorced	8	7.1
Department		
Surgery	16	14.3
Medicine	31	27.6
Pediatrics	27	24.1
Obstetrics/gynecology	6	5.4
Others	32	28.6
Position		
Resident	32	28.6
Specialist	57	50.9
Consultant	23	20.5

Table 2: Physicians' opinions regarding referral from primary care ($n=112$)

	Frequency	Percentage
You consider referral rate		
Highly frequent (>10%)	34	30.4
Frequent (5%–10%)	34	30.4
Average (5%)	31	27.6
Below average (1%–4%)	9	8
Infrequently (0%–1%)	4	3.6
Reason for referral to 2-year health-care facilities		
Take over patient	16	14.3
Diagnose difficult case	24	21.4
More assessment	45	40.1
Specialized treatment	48	42.9
Others	5	4.5
Referring notes more informative if referring doctor was		
General practitioner	25	22.3
Family physician	87	77.7
Investigations done at the PHC centers are		
Helpful for diagnosis	60	53.6
Useless for diagnosis	41	36.6
Unnecessary	11	9.8
Treatments received at PHC centers are		
Appropriate	57	50.9
Inappropriate	50	44.6
Wrong	5	4.5

specialists, whereas 28.6% and 20.5% were residents and consultants, respectively.

Opinion Regarding Referral from Primary Care

Table 2 summarized the opinions of physicians working in secondary-care governmental hospitals regarding referral from PHCCs. Majority of them (88.4%) considered the referral rate high frequent “>10%” (30.4%), frequent “5%–10%” (30.4%), or average “5%” (27.6%). The commonest reported reasons for referral from PHCCs were seeking specialized treatment (42.9%), more assessment of patients (40.1%), and the diagnosis of difficult cases (21.4%). Almost three-quarter of them (77.7%) considered referring notes to be more informative if referring doctor was a family physician. More than half of them (53.6%) reported that investigations done in PHCC are helpful for diagnosis, whereas 36.6% claimed that these investigations are useless. About half the number of physicians (50.9%) reported that treatment received at PHCC is appropriate, whereas 44.6% of them described it as inappropriate.

Recommendations to Improve the Quality of Patients' Referral

The commonest reported recommendations mentioned by physicians to improve the quality of patients' referral from PHCCs were in-service training for all doctors working at the health center (94.6%), at least one family physician should be appointed at each PHC center (94.6%), in-service training for all medical personnel working at the health center (91.1%), feedback referral notes by the hospital's specialists and consultants to the health center doctors (90.2%), and clear, well written, or typed referral notes (87.5%) [Table 3].

Feedback Referral Note

More than half the number of physicians (52.5%) reported that they never issued feedback notes to PHCCs regarding referred cases, whereas 20.8% of them reported that they always issued such notes.

Among those who never issued feedback notes for referred cases, 47.2% of them mentioned that there was no back referral of cases, whereas 24.5% of them mentioned that these feedback notes were not used and 22.6% of them had no time for that. Finally, 9.4% found that these notes had no benefits.

As obvious from Figure 1, almost two-thirds (66.1%) of physicians working in governmental secondary health-care hospitals reported that there are rules for referring patients.

Most of them reported that rules for referring patients existed (78%) and were oriented by these rules as shown in Figure 2.

Among physicians who were oriented by the rules of referring of patients, 67.2% of them claimed that these rules are accessible to everybody as demonstrated in Figure 3.

Table 3: Physicians' recommendations to improve the quality of patients' referral from primary health care to secondary health care

Physician's recommendations to improve the quality of patients' referral	Frequency	Percentage
Clear, well-written, or typed referral notes	98	87.5
Network communications between the PHC centers and the hospitals	83	74.1
Common base for patient's electronic files	88	78.6
Availability of ambulance service for all PHC centers	91	81.3
At least one family physician should be appointed at each PHC center	106	94.6
In-service training for all doctors working at the health center	106	94.6
In-service training for all medical personnel working at the health center	102	91.1
Feedback referral notes by the hospital's specialists and consultants to the health center doctors	101	90.2
If yes, how frequently this should be done? (n = 101)		
Always	21	20.8
Sometimes	27	26.7
Not at all	53	52.5

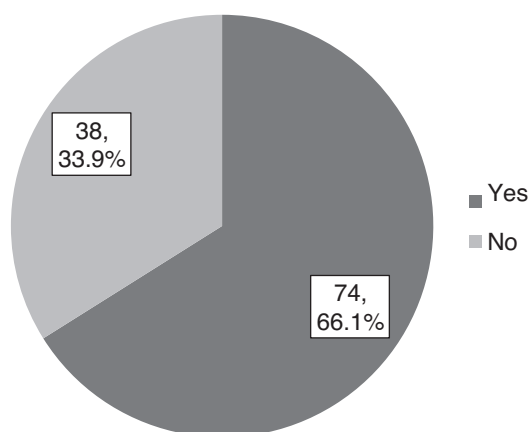


Figure 1: Existence of rules for referring patients.

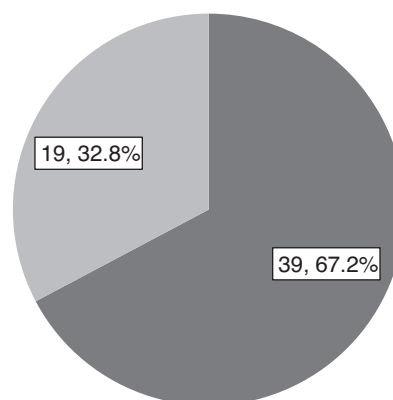


Figure 3: Accessibility of rules for referring patients to everybody among physicians who are oriented with the existence of these rules (n=58).

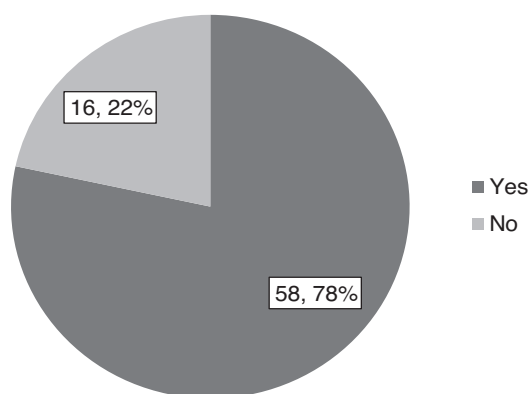


Figure 2: Orientation with the rules for patients' referral (n=74).

Factors Associated with Performing Feedback Referral Notes

From Table 4, it is realized that older physicians (>50 years) performed feedback referral notes either always or sometimes at a significantly higher rate than younger

physicians (76.5% versus 50% among those ages between 41 and 50 years and 30.8% among those aged 40 years or younger). The difference was statistically significant. Other studied factors (gender, marital status, department, and position) were not significantly associated with the performing of feedback referral notes.

Table 5 demonstrates that the referral rate of patients from PHCCs to secondary governmental secondary-care hospitals in Taif during a 1-month period was 2.7 per 100 patient visits. Regarding the feedback referral notes from secondary health-care PHCCs services to PHCCs, all of the investigated managers of PHCCs in Taif reported 0%.

Discussion

Referrals from PHCCs to secondary-care hospitals are of a major importance in several respects. From the patient's point of view, a medically appropriate and timely referral may provide the key to an effective treatment. As a matter of health-care economics, a well-functioning alternation between the primary and secondary levels of care indicates

Table 4: Factors associated with performing feedback referral notes by the hospital physician to primary health-care center (*n*=101)

	Performing feedback referral notes			χ^2	<i>p</i>
	Always, <i>N</i> =21	Sometimes, <i>N</i> = 27	Not at all ^a , <i>N</i> = 69		
Age (years)					
≤40 (<i>n</i> = 65)	10 (15.4)	10 (15.4)	45 (69.2)	12.94	0.012
41–50 (<i>n</i> = 30)	6 (20.0)	9 (30.0)	15 (50.0)		
>50 (<i>n</i> = 17)	5 (29.4)	8 (47.1)	4 (23.5)		
Gender				4.27	0.118
Male (<i>n</i> = 79)	11 (13.9)	21 (26.6)	47 (59.5)		
Female (<i>n</i> = 33)	10 (30.3)	6 (18.2)	17 (51.5)		
Marital status				6.99	0.137
Single (<i>n</i> = 10)	2 (20.0)	0 (0.0)	8 (80.0)		
Married (<i>n</i> = 94)	17 (18.1)	27 (28.7)	50 (53.2)		
Divorced (<i>n</i> = 8)	2 (25.0)	0 (0.0)	6 (75.0)		
Department				13.22	0.104
Surgery (<i>n</i> = 16)	2 (12.5)	4 (25.0)	10 (62.5)		
Medicine (<i>n</i> = 31)	4 (12.9)	9 (29.0)	18 (58.1)		
Pediatrics (<i>n</i> = 27)	2 (7.4)	8 (29.6)	17 (63.0)		
Obstetrics/Gynecology (<i>n</i> = 6)	1 (16.7)	0 (0.0)	5 (83.3)		
Others (<i>n</i> = 32)	12 (37.5)	6 (18.8)	14 (43.8)		
Position				5.59	0.232
Resident (<i>n</i> = 32)	2 (6.3)	9 (28.1)	21 (65.6)		
Specialist (<i>n</i> = 57)	15 (26.3)	13 (22.8)	29 (50.9)		
Consultant (<i>n</i> = 23)	4 (17.4)	5 (21.7)	14 (60.9)		

^aWe have added those who did not recommend issuing feedback note to this category.

Table 5: Referral rate of patient from primary to secondary health-care services in Taif throughout June, 2014

	Number of patients serving/month	Number of patients referred/month	Referral rate (%)
Awdah center	4,238	93	2.19
Al Shuhada Al Janubiyah center	1,464	41	2.80
Wasat Al Madina center	2,077	103	4.96
Wadi Wag center	1,287	69	5.36
Ashutbah center	53,451	1,594	2.98
Sharq Nakhab center	3,609	64	1.77
Gharb Nakhab center	56,093	1,295	2.31
Total	122,219	3,259	2.67

that the available resources have been put to good use, while a poorly functioning one would subject the system as a whole to marked inefficiency.^[12–14]

This study demonstrated several defects in the referral process from PHCCs to secondary governmental hospitals in Taif, according to the physicians of secondary-care governmental hospitals. The results of this study support a report published previously in the Asir region.^[15]

The overall referral rate observed in this study (2.7%) was low when compared with one group of studies, where the referral rate ranged between 3.8 and 6.6 per 100 patient visits,^[10,15,16] but was higher than that reported in another study (1.6 per 100 patient visits).^[17] It has been suggested that the wide variation in the referral rates among general practitioners

(GPs) could be explained partly by chance^[18] and partly by the context and individual approaches to health care.^[19]

In Norway, the mean referral rate to secondary care was 13.7% (13.7 per 100 consultations), with a striking range of 4.0% to 28.0% among the GPs.^[20]

In this study, the hospital feedback reports, according to the managers of PHCCs, did not exist when compared with a rate of 39.2 per 100 referral letters reported in a study conducted by Khattab *et al.* in Abha and a rate of 35.4 per 100 referral letters reported in Riyadh.^[11] The reason for such a low rate of feedback reports, compared with higher rates in some western countries (55–88 per 100 referrals),^[21] could be the lack of awareness on the part of hospital consultants of the importance of communication with PHCCs in

maintaining the continuity of care and patient satisfaction. Nonetheless, there was a considerable variability in the feedback rate among different hospital departments; however, it was not significant. For example, 37.5% of departments other than the main departments reported issuing feedback reports always when compared with 7.4% in Pediatrics, 12.5% in Surgery, 12.9% in Medicine, and 16.7% in Obstetrics and Gynecology departments.

In another study conducted in Makkah by Baghdadi and Baghdadi,^[11] not all the hospital doctors were concerned giving feedback notes to the PHCCs. Even the doctors who gave feedback notes to the PHCCs were not doing that all the time. The reasons behind skipping the referral feedback notes were either the doctors were overloaded or they thought it was of no use, and some did not send the patient to the PHCCs at all. These reasons are very close to what has been observed in this study. In addition, Kordy *et al.* in Jeddah^[10] concluded that the follow-up and feedback system needs to be reinforced.

In this study, contradicting to what has been mentioned by the managers of PHCCs, 20.8% of physicians working in secondary-care hospitals reported that they always issued feedback notes. This point needs more in-depth investigation to estimate properly the actual rate of issuing feedback notes and its predictors.

In this study, the issuing of feedback reports by female physicians was always higher, although not significant than male physicians. This is consistent with the gender differences found in other studies. Vehvilainen *et al.*^[22] found that female GPs issued feedback notes 22% more than the male GPs (female GP rate 5.48% versus 4.50% among male GP). One explanation for this difference may be gender differences in risk tolerance.

In this study, the goal of patients' referral as seen by physicians were seeking specialized treatment (42.9%), more assessment of patients (40.1%), and diagnosis of difficult cases (21.4%). In a study conducted by Rosemann *et al.* in Netherlands,^[23] the referral was exclusively for diagnostic purposes, although diagnostic uncertainty was an important reason for the referral in 65.5% of instances. Medico-legal security was said to be among the reasons for more than one-fifth of all referrals (20.9%). Nearly, all GPs (96.5%) thought that they had clearly defined the goal of the referral. The exclusion of a serious illness was a less common goal of the GPs (42.8%).

Most of the physicians working in secondary-care hospitals in this study claimed that referral notes were more informative if they were issued by family physicians than GPs. This finding could reflect the good quality of training offered to family physicians during their residency period with emphasis on the quality and basic requirements of referral notes. On the other hand, almost half the number of physicians in this study reported that investigations done at PHCCs are either useless or unnecessary, and treatments received at PHCCs are either inappropriate or wrong. Furthermore, in-depth investigation of this point needs additional research.

Baghdadi and Baghdadi^[11] concluded that the PHCCs in Holy Makkah and those especially referring to Al-Noor and Al-Shesha had a poor referral system, and the PHCCs lack the availability of a family physician and communication. The recording of essential patient information by the PHCCs in their referral letters and a thorough feedback report by the hospitals to whom these patients are referred will help to maintain the continuity of care of patients and result in better patient satisfaction.

This study has an important limitation. Although it involved a representative sample of physicians working in secondary governmental hospitals in Taif and managers of more than one-third of PHCCs in the main city of Taif, it, nonetheless, reflects the current state of affairs in Taif rural area containing a number of middle-sized towns and villages. In such areas, the familiarity, and often the personal acquaintance, of the collaborating physicians with one another might have generated different results than would have been obtained in a big city. The applicability of the findings to big city conditions would, therefore, seem to be limited at best.

Conclusion

Conclusively, this study highlighted some of the inadequacies in the effectiveness of the referral system in a PHCC from the perspective of physicians working in governmental secondary care hospitals in Taif and suggested various ways of dealing with them. In addition, the study revealed either no information (according to primary-care managers) or a low (according to secondary-care physicians) level of information feedback to the primary-care doctors.

Acknowledgment

We cannot express enough thanks to Dr. Bandar AlJuaid for his continued support and encouragement. We offer our sincere appreciation for the learning opportunities provided by him. Our appreciation goes to Dr. Raouf Afifi who offered us a lot of advices throughout the preparation of the final draft.

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How to cite this article: Mohammad AlGhamdi O, Al-Malki B, Eid Nahhas A, Al-Malki AD. Rate of referral from primary health care to secondary health care among governmental hospitals in Taif governorate, KSA. *Int J Med Sci Public Health* 2015;4:1457-1463

Source of Support: Nil, **Conflict of Interest:** None declared.