

MANAGEMENT OF INAPPROPRIATE REFERRALS IN WAZARAT HEALTH CENTER, RIYADH, SAUDI ARABIA

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ABSTRACT

Background: Referrals are an essential part of the health care system and have a significant impact on patient services, medical staff, and health care costs. The referral process is a complex one in which the General Practitioner (GP) plays the essential role as a decision maker. However, once the referral initiated, its implementation involves the GP, the patient, the specialist and the health system.

Aims & Objective: This study aims to identify the factors related to inappropriate referrals and to suggest the best management approach to improve the quality of referrals in Wazarat Health Center (WHC) in Riyadh, Saudi Arabia.

Material and Methods: The study surveyed all the primary care doctors (GPs) who work in the WHC through anonymous, self-completed, web-based questionnaires. A total of 51 GPs were included in the study. The survey obtained the participants' opinions about 32 different factors that contribute to making inappropriate referrals in WHC.

Results: The study results show that 67.44% of surveyed GPs either agree or strongly agree that "poor GP awareness of the available secondary care clinics" is the main GP's factor for making inappropriate referrals. 83.8% of surveyed doctors agreed or strongly agreed that "patients' requests and demands for referral" is the main patient's factor that contributes to making inappropriate referrals, and 86.04% of GPs agreed or strongly agreed that a "lack of specialist referral feedback" is the main specialists' factor that contributes to making inappropriate referrals. 90.7% of surveyed GP either agreed or strongly agreed that "the lack of continuity of care" in WHC and "difficulty with GP-specialist phone communication" in Riyadh Military Hospital are the two main factors concerning the RMH system that contribute in making inappropriate referrals. Finally, 83.7% of GPs agreed or strongly agreed that the best management approach for improving the referral process from primary care to secondary care in RMH would be to conduct "periodic referral auditing".

Conclusion: The study identified a number of barriers to achieve high-quality referrals in WHC. Effort put towards improving the system to ensure the continuity of care and to facilitate GP-specialist communication are priority recommendations. The study also recommends a review of the hospital policy that obligates specialists to provide referral feedback within a reasonable time frame. Furthermore, the study encourages distributing the GPs in small teams and advocating for team work. Finally, the study recommends establishing a referral audit project as a tool to monitor and improve the quality of referrals in WHC.

Key-Words: Referral; General Practitioners; Health System; Saudi Arabia

Introduction

The word 'referral' comes from the word 'refer', which means "to redirect to a source for help or information".^[1] In medicine, a referral is a request from one physician (General Practitioner) to another medical doctor (Specialist) to care for a patient's specific health issue.^[2] Although initiation of a referral from a primary care doctor to the secondary care doctor seems to be a simple process, yet proper referral have generated a lot of debates (Graham et al, 2008).^[3] Foot et al (2010) claim that "referrals are often not a simple mechanical process, but a highly complex interaction that involves multiple stakeholders who are influenced by a wide range of factors".^[4]

Medical professionals report two types of referrals, elective and emergency (National Leadership and Innovation Agency for Healthcare, 2007). The elective one is known as a routine (planned) referral, in which the patient's medical condition is evaluated first by the

primary care (General Practitioner) and then referred to the appropriate specialist within an acceptable time frame. The elective referral can be either a routine appointment which might take up to one year of waiting time or an urgent appointment which should be conducted within 2 weeks' time. Emergency referrals are the opposite: patients with emergency referrals need to be seen by the secondary care specialist immediately.^[5]

Clearly, primary care doctors work hand-in-hand with their colleagues in different specialties to regulate patients' access to secondary care services. However, Reichman (2007)^[2] argued that family physician (primary care doctor) possess the knowledge and skills to deal with 95% of the complains presented at patient visits, but at least once per day a patient's condition may require more advance care by the specialist. Therefore, some studies report that approximately 5% of primary care visits include a referral, 71% have a medication prescribed, 36% a laboratory test and 13% order an imaging study.^[6]

Referrals made by primary care doctors (GPs) have significant impact on the quality and the cost of health care. Since the specialist care services is more advanced and intensive than primary care services, the cost of specialist's services also is twice or more, than the cost of health services within primary care boundary. However, some referrals may result in harmful outcomes, such as unnecessary intervention. On the other hand, under referring may deprive the patient from an intervention that would have been beneficial.^[7]

Health experts agree that appropriate referrals and high quality referrals share many of the same characteristics. Blundell et al. (2010) claim that there are three factors attributed to the high-quality referral: the necessity of the referral, the appropriateness of the destination, and the quality of the referral process.^[8] Reichman (2007)^[2] argues that the key for high-quality referral is making sure that "the right physician is doing the right things at the right time for the right patient". The inappropriate referral, by contrast, is described in the medical literature as sharing the characteristics of the low-quality referral. That was described by Davis and Elwyn (2006)^[9] study where they argue inappropriate referrals can be classified under three broad categories. First are referrals that are made to the wrong specialist or service? Second are referrals that have insufficient information from the referring doctor regarding the patient's medical history or the urgency of the referral? Third are referrals that do not conform to the common practice and clinical guidelines?

The unexplained variations in referral rates suggest that some patients are referred inappropriately, which consumes health care resources that could have been used to provide other services. Moreover, the variations in referral rates suggest that some patients are inappropriately managed in primary care settings when they would have benefitted from specialist care. There is also evidence that inappropriate referrals can make the patients undergo unnecessary diagnostic or therapeutic procedures or even hospitalization.^[10] Wilkins (2010) claims that physicians accommodate only 40% of specialist referral requests. This means that physicians deny almost 60% of patients' requests for referrals.^[11] Health experts acknowledge that some patients who deserve to be referred are denied that right. McBride et al (2010) noted that socially disadvantaged people, such as older people, and women are more likely to consult their general practitioner but less likely to receive secondary care. Identifying these categories of neglected patients is extremely important for achieving comprehensive health care coverage.^[12]

Nevertheless, studies show that 80% of patients surveyed completed their specialist referrals, while the remaining 20% do not successfully pursue their referrals. The most common reason patients given for failing to follow up on referrals is the belief that the problem had been resolved (47.5%). The second reason is a lack of time (37.3%), and the third is the disagreement with their doctor over why the referral was made (26.5%).^[13] This study raises the issue of communication between the referring physician and the patient. It appears that some patients are not involved in the referral decision. Moreover, it is argued that patients' expectations are not considered when the referral is first issued.

This study aims to identify the factors related to inappropriate referrals and to suggest the best management approach to improve the quality of referrals in Wazarat Health Center (WHC) by conducting a quantitative study. In spite of measures initiated by the Family and Community Medicine Department to improve the quality of referrals, no previous study has been conducted in WHC investigating the factors that contribute to making inappropriate referrals at this scale. Although there are many research studies noted in the literature about the referral process, it is argued that each health organization has its own factors that require analysis within the organizational context in order to find suitable recommendations. The following study thus targets only the WHC in order to identify its particular institutional needs and to make recommendations accordingly.

Materials and Methods

Setting

The Ministry of Health (MOH) is the main government agency entrusted with the provision of medical health care services for the population of Saudi Arabia. MOH provides primary health care services through a network of almost 2000 health care center throughout Saudi Arabia. Three other governmental health care providers in Saudi Arabia supplement the work done by the MOH: the Ministry of Defense and Aviation (MODA), the Ministry of Interior (MOI) and the Saudi Arabian National Guard (SANG).^[14] These organizations finance and deliver primary, secondary and tertiary health care services to security and armed forces employees and their families.

Riyadh Military Hospital (RMH) is one of the biggest hospitals of the Ministry of Defence and Aviation (MODA) in Saudi Arabia. The Family and Community Medicine Department in RMH has 10 peripheral primary care centres distributed across Riyadh city. Wazarat Health

Centre is the central primary care centre of the Family and Community Medicine Department in RMH. Where it has 30 general clinics which are staffed by 51 qualified family physicians.

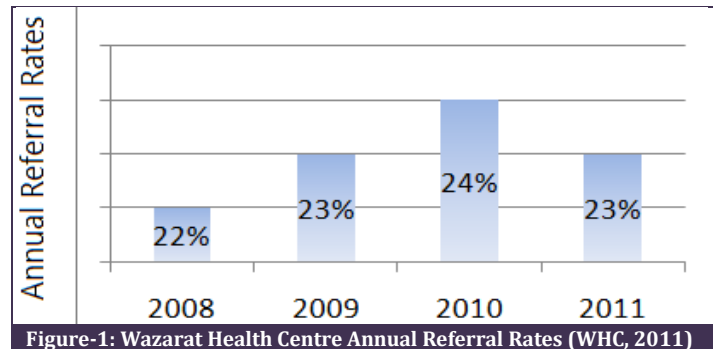
The WHC serves all eligible patients in Riyadh Military Hospital (RMH), where they are estimated to be one million and 200 thousand patients. The average consultation time for the general clinic in WHC is 10 minutes per patient. The total number of doctor consultations in the WHC is around 800 consultations per day in the general clinics alone, not including walk-in clinics and chronic disease clinics (CDC).^[15] The WHC is the only primary care centre in Saudi Arabia that has a certificate of Joint Commission International (JCI) accreditation.^[16] Which is an international certificate given by JCI board for meeting the patient safety standards and quality improvement in the health organization. The WHC provides a range of services to patients: it has walk-in clinics, chronic disease clinics (diabetic, hypertensive, and asthmatic clinics), and wellness screening clinics for women, wellness screening clinics for babies and infants, and a preventive medicine clinic. The WHC also has a small radiology division for simple x-rays, a small biochemistry division for blood extraction, and an out-patient pharmacy. All these services are available within the WHC building. However, more advanced investigations and interventions can be requested by GPs and are generally performed off-site. These procedures require a referral by a WHC GP.

The Current Referral System in WHC

The current referral system in WHC is based on the family physician medical judgement. Once a referral is written by the family physician, the patient takes it to the reception desk in the main hospital of RMH, and then an appointment slip containing the date and time of the specialist appointment given to the patient. The referral letter from WHC GP to the specialists is a white paper headed by the hospital logo and the referred patient's information (file number, full name, date). The patient's medical history, examination, investigation and reasons for referral should also be included.

The WHC data centre reported a 23% referral rate from WHC general clinics to different specialty departments in 2011.^[15] The administration of the Family and Community Medicine Department frequently receives complaints from different speciality departments regarding the inappropriateness of the referrals. Several administrative measures have been taken to try and reduce the amount of complaints regarding inappropriate deferrals, including distributing clinical guidelines & hospital referral protocol

to all family physicians and conducting daily continuing professional development (CPD) sessions in the break time from 12-1 pm. Nevertheless, the percentage does not seem to have fallen over the past 4 years (figure 1)



The current study is concerned with the elective referrals from general clinics in the WHC to different specialities in RMH. The study aims to gain the perspectives of multiple GPs regarding the factors that are related to inappropriate referrals. It also aims to improve the quality of referrals and to suggest the best referrals management approach within the WHC.

Questionnaire Rationales

The management of inappropriate referrals is the business of every family physician. Studying this topic requires the participation of large numbers of primary care doctors in order to capture as much information as possible on the factors that contribute to making inappropriate referrals. This study aims to supply that information. The study is also interested in collecting more general information related to the attitudes and behaviours of GPs toward referrals. For the reasons listed above, a questionnaire seemed to be the most suitable tool for data collection in this study. Although focus group or face-to-face interview methods might have revealed more in-depth data about referrals and their management^[17], but the large number of participants required and time limitations hindered the possibility of using these two methods. The study targeted GPs, as they are the first line of medical doctors who deal with patients and initiate referrals. In addition, GPs are required to communicate with their colleagues in other specialties, and they have to deal with the system to provide the best available health care service for their patients. Thus, the study is most interested in their views and feedback of the factors that contribute to making inappropriate referrals in the WHC.

Data Collection

This study defines the referral as a primary care doctors' decision to send the patient to secondary care specialists

for more detailed study of a specific medical issue. These specialists can be either physicians (surgeons, endocrinologists, paediatricians, etc.) or non-physicians (physiotherapists, respiratory therapists, hearing test technicians, etc.). Urgent referrals or referrals to the laboratory and radiological imaging are out of the scope of this study. The inappropriate referral is defined in this study under three categories. First, referrals that are made to the wrong specialist or service. Second, referrals that have insufficient information of the referring doctor, patients, or the urgency of the referral. Third, referrals that are not conformed to the common practice and clinical guidelines.^[9]

Data for this study was collected through anonymous self-completed questionnaires which were filled out by family physicians (GPs) who work in the WHC. A web link was sent to the family physicians via an email which opened up a web-based electronic questionnaire.¹⁸ The questionnaire was piloted by nine primary care doctors who work in three different primary care centres else the WHC prior to launching. The piloted sample was not included in the analysis.

The questionnaires collected general participant information like age, gender, and primary care doctor grade in the WHC. On a more theoretical level, the questionnaire intended to explore the views of primary care doctors toward referrals through measuring their level of agreement or disagreement in 5-point Likert scale (strongly disagree to strongly agree) in 32 likert items distributed in five domains. The first domain examined factors that GPs identified related to inappropriate referrals. The second domain examined the patient's factors that are related to inappropriate referrals. The third domain considered the specialist's factors that are related to inappropriate referrals. In the fourth domain, participants evaluated factors within the system which they considered to be related to the inappropriate referrals. Finally, participants were asked to evaluate different approaches for the management of inappropriate referrals in the WHC.

Statistical Analysis

The information obtained was analysed using the Statistical Package for the Social Sciences (SPSS) program. The 32 factors that were surveyed for their impact and weight on the referral process are reported as item means from 1 to 5, where 1 means strongly disagree, 2 means disagree, 3 means neutral, 4 means agree, and 5 means strongly agree using likert scale. The study recommendations for improving the quality of referrals in

WHC were generated from the analysed data.

Selection and Sampling

The study surveyed all the primary care doctors (GPs) who work in the WHC From different grades; Senior House Officers, Registrars, Senior Registrars, and Consultants. In total, 51 primary care doctors are included in this survey. a response rate of 80% or above, is a sufficient sample to analyse the data and generate significant results. The survey was sent by email to primary care doctors on 24th of September 2012. All data obtained from the 24th of September to the 30th of September (one week) will be included in the final analysis for this study. Questionnaires that are partially filled or filled by anyone but primary care doctors working in the WHC will be excluded. Any questionnaire filled in after 11:59PM on the 30th of September will also be excluded from the analysis. All survey questions must be answered or the survey will not let the participant proceed to the next page of the questionnaire.

Ethical Consideration

The Ethical and Research Committee in the Family and Community Medicine Department was sought for its approval of this study. The study obtained the necessary approval before disseminating the survey to the study sample. The questionnaires are all anonymous and the email addresses of all GP participants will not be shown when the survey results are accessed by the researcher. All obtained information, as well as the survey results, will be kept confidential and then will be destroyed 3 months after the study's completion. Participation in this survey is voluntary and participation consent forms are required from all survey participants before they start filling out the questionnaires. Participants are free to drop their participation at any time before the analysing of the data.

Results

Of the 51 primary care doctors who were contacted by email to complete the survey, 43 doctors responded, which gives a response rate around 84.3%. A total of Three surveys were excluded from the final analysis, two because they were partially filled and one because it was filled by a primary care doctor who works in a different centre (figure 2). The survey was completed by 29 male and 14 female primary care doctors from different levels (consultants, senior registrars, registrars, and senior house officer doctors) who work in the WHC (figure 3). The average age of the participants is 36.9 years.

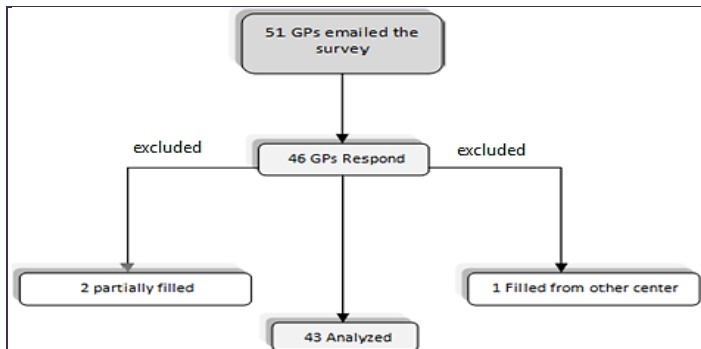


Figure-2: Study Sample and Analysis

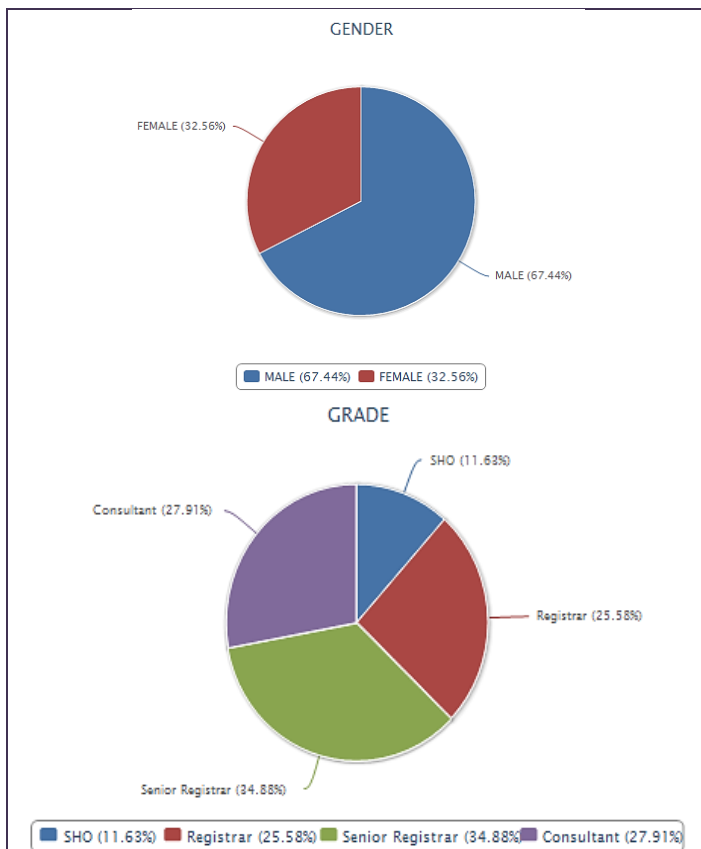


Figure-3: Participant Characteristics

Regarding the first domain of analysis (factors identified by GPs contributing to inappropriate referrals in the WHC), the study demonstrated that 29 primary care doctors (67.44%) have chosen either agree or strongly agree for “poor GP awareness of the available secondary care clinics” as the main factor for making inappropriate referral in RMH. “Poor GP knowledge” came as the second factor, where 25 doctors (58.2%) agreed or strongly agreed that “poor GP knowledge” contributed in making inappropriate referrals. Almost half of the surveyed GPs (51%) agreed or strongly agreed that “low GP tolerance of uncertainty” is one of the contributing factors to inappropriate referrals. The rest of the factors identified by GPs, including; poor GP medical skills, poor GP communication skills with patients and specialists did not show significant results (table 1).

Table-1: Values of GP's Factors Contributed to Making Inappropriate Referrals in WHC

Factor	Strongly Disagree		Dis-agree		Neutral		Agree		Strongly Agree		Ave. Score
	No	%	No	%	No	%	No	%	No	%	
Poor GP Knowledge	2	4.7	4	9.3	12	27.9	19	44.2	6	14.0	3.53
Poor GP Medical Skills	1	2.3	10	23.3	14	32.6	13	30.2	5	11.6	3.26
Poor GP Knowledge of available secondary care clinics	0	0.0	5	11.6	9	20.9	21	48.8	8	18.6	3.74
Poor GP Communication skills with the patient	3	7.0	7	16.3	20	46.5	9	20.9	4	9.3	3.09
Poor GP Communication skills with the specialist	3	7.0	15	34.9	10	23.3	11	25.6	4	9.3	2.95
Low GP tolerance of uncertainty	0	0.0	5	11.6	16	37.2	13	30.2	9	20.9	3.60

Table-2: Values of Patient's Factors Contributed to Making Inappropriate Referrals in WHC

Factor	Strongly Disagree		Dis-agree		Neutral		Agree		Strongly Agree		Ave. Score
	No	%	No	%	No	%	No	%	No	%	
Poor Patient-GP relationship	0	0.0	9	20.9	8	18.6	19	44.2	7	16.3	3.56
Patient request and demand	0	0.0	3	7.0	4	9.3	14	32.6	22	51.2	4.28
Unaddressed patient's expectations	0	0.0	7	16.3	13	30.2	14	32.6	9	20.9	3.58
High Patient's level of education	4	9.3	18	41.9	13	30.2	7	16.3	1	2.3	2.60
Low Patient's level of education	5	11.6	11	25.6	13	30.2	10	23.3	4	9.3	2.93

Table-3: Values of Specialist's Factors that Contributed to Making Inappropriate Referrals in WHC

Factor	Strongly Disagree		Dis-agree		Neutral		Agree		Strongly Agree		Ave. Score
	No	%	No	%	No	%	No	%	No	%	
Poor GP-specialist professional relationship	0	0.0	9	20.9	15	34.9	12	27.9	7	16.3	3.40
Poor specialist attitude toward GP's referrals	1	2.3	12	27.9	10	23.3	13	30.2	7	16.3	3.30
Far located specialist	4	9.3	11	25.6	12	27.9	11	25.6	5	11.6	3.05
Lack of specialist referral feedback	2	4.7	2	4.7	2	4.7	13	30.2	24	55.8	4.28

Table-4: Values of System Factors Contributed to Making Inappropriate Referrals in WHC

Factor	Strongly Disagree		Dis-agree		Neutral		Agree		Strongly Agree		Ave. Score
	No	%	No	%	No	%	No	%	No	%	
Lack of GP continuity care	1	2.3	1	2.3	2	4.7	13	30.2	26	60.5	4.44
Lack of resources in WHC (e.g. diagnosis/treatment tools)	3	7.0	16	37.2	6	14.0	13	30.2	5	11.6	3.02
Difficult GP-specialist phone communication	1	2.3	2	4.7	1	2.3	12	27.9	27	62.8	4.44
Lack of shared patient's medical record between the GP and the Specialist	1	2.3	5	11.6	14	32.6	10	23.3	13	30.2	3.67
High GP workload	1	2.3	7	16.3	11	25.6	13	30.2	11	25.6	3.60
Poor referral letter design	7	16.3	11	25.6	15	34.9	5	11.6	5	11.6	2.77
Lack of clear hospital referral protocols	1	2.3	3	7.0	17	39.5	13	30.2	9	20.9	3.60

Table-5: Values of Suggested Management Approaches in WHC

Factor	Strongly Disagree		Dis-agree		Neutral		Agree		Strongly Agree		Ave. Score
	No	%	No	%	No	%	No	%	No	%	
Periodic referral auditing	3	7.0	1	2.3	3	7.0	15	34.9	21	48.8	4.16
Peer review and feedback	3	7.0	3	7.0	5	11.6	20	46.5	12	27.9	3.81
Referral to triage /Screening clinics	7	16.3	16	37.2	6	14.0	7	16.3	7	16.3	2.79
Distribution of clinical guidelines to the GPs	7	16.3	7	16.3	7	16.3	7	16.3	15	34.9	3.37
Periodic referral orientation in CPD lectures	4	9.3	4	9.3	8	18.6	16	37.2	11	25.6	3.60

Regarding the patient factors, the survey shows that 36 (83.8%) out of 43 surveyed doctors agreed or strongly agreed that patients' requests and demands for referral is the main factor concerning patients for making inappropriate referral in WHC. The other patient factors didn't show strong correlation as significant factors contributing to making inappropriate referrals in WHC as they are shown in (table 2). Regarding the specialist's factors that contribute to making inappropriate referrals in WHC, the survey revealed that 37 primary care doctors (86%) agreed or strongly agreed that a "lack of specialist referral feedback" is the main factor concerning specialists that contributes to making inappropriate referrals. The rest of specialist's factors didn't show significant results (table 3).

Interestingly, the study revealed that 39 GPs who represent 90.7% of surveyed primary care doctors have either agreed or strongly agreed that "the lack of continuity of care" in WHC and "the difficult GP-specialist phone communication" in RMH are the two main factors concerning the RMH system that contribute in making inappropriate referrals in WHC (Table 4). Finally, the survey revealed that 36 primary care doctors (83.7%) agreed or strongly agreed that the best management approach for improving the referral process from primary care to secondary care in RMH is by conducting "periodic referral auditing" in WHC. Furthermore, 32 primary care doctors (74.4%) agreed or strongly agreed that "Peer review and feedback" would be the second best approach for improving the referral process (Table 5).

Discussion

The survey was completed by 29 male and 14 female primary care physicians from different medical levels. 67.44% of the surveyed GPs in WHC think that "lack of awareness of secondary care facilities" in the Riyadh military hospital contribute to making inappropriate referrals by referring the patients to the wrong specialty or less specialized subspecialty. For example, generally a patient with a hand injury is used to be referred to an orthopedic surgeon while recently these patients are supposed to be referred to plastic surgeon. Another example is that patients with breast cancer or lumps are accustomed to being referred to general surgeons in RMH, but for the last 3 years a breast cancer clinic was established for these cases. Thus many GPs have chosen lack of awareness of secondary care facilities as the main general practitioner's factor for making inappropriate referrals in WHC. This observation goes along with Jenkins (1993) finding^[19], where he found that 7% of the referrals go to the wrong specialties. Similarly, Speed and Crisp

(2005)^[20] claim that 27% of referrals to orthopedics are supposed to be referred to rheumatology instead. Improving GP knowledge is an accumulative process that depends on many variables such as: personal effort and attitude, obligation for medical license revalidation, health organization support, and a work environment that supports continuing medical professionalism.

The survey revealed that 83.7% of GPs in WHC believe that the patients demand and request for referral is the main patient's factor for making inappropriate referrals. The relatively high percentage of this factor raises many critical issues about the service in WHC such as the reasons for the patient's demand for referral, the GP's negotiation skills with the patient, and how ethical it is to deny the patient's request for referral. Addressing these issues is required in order to understand why the patient's demand or request for referral is the main patient's factor contributing to making inappropriate referral in WHC.

Ideally, patients are offered a referral by the GP when the patient's condition needs further work up by specialist. However, if the patient asks for referral that could be secondary to patient's belief that the specialist is more competent than the GP (Bordejé et al, 2000).^[21] Or it could be because the GP did not properly evaluate the patient and missed something, that deserve to seek specialist service for it. On the other hand, patient requests for referral is not an uncommon thing in primary care practice. Studies revealed that primary care doctors deny almost 60% of patients request for referrals.^[11]

Many strategic approaches have been mentioned by experts to deal with unreasonable patient requests for referrals. That can be achieved by exploring the context of the referral request such as; patient's ideas, concern, and expectations for their health care needs and giving the patient the right to seek a second opinion from another primary care doctor.^[22] Therefore, GPs need to develop their negotiation skills to be able to handle inappropriate patient request for referral, medication, or even investigation without letting the patient feels that his/her request was rejected unjustifiably.

Analysis of the specialist factors that contribute in making inappropriate referrals in WHC revealed that 86% of the GPs who participated in the survey think that the main specialist factor for low quality referral is the lack of the specialist feedback for the referral. Although no previous study has been conducted in WHC about the percentage of the referrals feedback that the GPs received as a response to their referrals, it seems the GPs in WHC very often receive no feedback. Specialist feedback to the referring GP

has a great impact on both the GP and the patient. Receiving feedback from the specialist empowers the professional relationship between the GP and the specialist and it keeps the referring physician updated with specialist intervention and management plans. Moreover, it provides a very unique learning opportunity for the GP. Therefore, Getting referral feedback from the specialist, strengthens the coordination between different levels of medical care and ensures the continuity of care.^[23]

Referral feedback reports vary from one health organization to another, based on the health organization policy, feedback system, and nature of care provided in secondary care units. In one study, referral feedback was higher from private secondary care providers (78%) than referral feedback from emergency rooms (48%)(Cummins et al, 1980).^[23] Another study reports that 62.2% of primary care doctors report that they have received feedback from specialists about their referrals (O'Malley and Reschovsky, 2011).^[24] On the other hand, Alalfi et al (2007)^[25] reports that referral feedback did not exceed 30% of the total referral letters that were sent to secondary care specialists.

The study concluded that the phone consultation is highly appreciated by the general practitioners due to its positive impact on the quality of care improvement. Furthermore, Wenger et al (2008)^[26] claim that phone consultations reduce the pediatrics specialist visit by 32% and pediatrics hospital transfer by 11%, which eventually reduces the health care cost and saves resources. The survey highlighted the gap in the Riyadh Military Hospital (RMH) system, where 90.7% of surveyed GPs found that reaching a specialist for phone consultation is difficult. Many valid inquiries are raised by this finding, such as the efficiency of the telecom system that connects WHC with the hospital and the amount of work pressure on the specialists that keep them too busy to respond to the phone consultation. Other issues like the presence of hospital policy that obligates or incentivizes the specialist to respond to phone consultation, are also raised. Further studies and evaluations are needed to address this factor in more details.

The last part in the survey charted GPs' suggestions for the best management approach to improve the referral quality and process in WHC. "Periodic referral auditing" was suggested by 83.7% of GPs who participated in the survey. Auditing is quality improvement tools which involves setting quality control standards, collecting data regarding current hospital operating practices and measuring the current practice against these standards (National Clinical

Audit Advisory Group, 2009). It is a spiral process that aims to identify and promote better health management practices (figure 4).

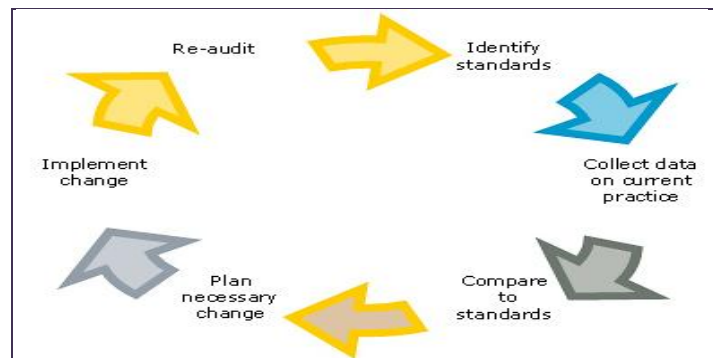


Figure-4: Clinical Audit Cycle (Irish College of General Practitioners, 2012)^[27]

Finally, referral to triage or screening clinics and distribution of clinical guidelines approaches were not chosen as a good approach for referral management in WHC: they have scored an overall neutral response in the study likert scale (2.8/5 – 3.3/5) (table 5). That could be because these two approaches have limited educational and training outcomes in comparison with referral auditing and peers review approaches. These findings go along with other studies that did not show distributing of clinical guidelines is a good approach to improve the quality of the referrals.^[28-30]

Conclusion

In conclusion, as WHC is one of 10 primary care centers that are belong to RMH, Generalizing this study's findings to the other primary care centers is possible and acceptable for the following reasons: all these centers have the same hospital system, share the same infrastructure, and serve the same patients with similar patient characteristics (social class, prevalence of diseases). However, WHC has more available resources (e.g. diagnostic and therapeutic tools) than other centers, thus applying this study's findings in these centers needs to take the availability of resources in consideration.

Strength and Limitation of the Study

The strength of this study lies in involving all the GPs who work in WHC in the survey. Their day-to-day experiences with the referral process and the barriers they face for making high-quality referrals were pooled and analyzed, to form valuable information that can be used to make quality improvements to the referral process in WHC. In addition, this study used the modern technologies (e-mail, online survey) to get as many responses as possible in relatively short period.

However, the study could have been more comprehensive by expanding its scope to include all the stakeholders in the referral process (patients, specialists, and health managers) in the survey. In addition, triangulating the study findings by conducting quantitative study (focus group, or one-on-one interviews) might reveal more in-depth data that could be valuable in improving the referral process in WHC.

Finally, the study was limited by its focus on the WHC as the biggest primary care center in Saudi Arabia. Further studies in other primary care centers might shed the light on more specific findings that might help in improving the referral process.

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