# Barriers of using electronic medical records among Saudi physicians

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# Abstract

Background: Adoptions of electronic medical records (EMRs) is restricted by many barriers, which may differ from one facility to another depending on the personal demographic data of such facility.

Objective: To assess the barriers of the physicians in Al-Hada Military Hospital in Taif City toward implementing EMR.

Materials and Methods: Questionnaire consisted of personal demographic variables, practical demographic variables, cost, data entry, and usefulness variables were distributed to 131 practicing physicians, who accepted to participate, were present at the time of the study (not on vacation or leave), and who were working in Al-Hada Military Hospital in Taif City (excluding visiting or locum physician).

Result: Of the 129 physicians, 107 were men representing 83% whereas women represented only 17%. Most of the participants were from family and community medicine (25%), followed by surgery (20%), pediatrics (14%), medicine (12%), and OBG (8%). Twenty-five (19%) strongly agreed that EMR is too costly, 20 (15%) participants strongly agreed that EMR is time-consuming, and 39 (30%) strongly agreed the easiness of data entry into EMR.

Conclusion: Generally, the barriers of Al-Hada Military Hospital physicians toward implementing computerization of medical record are mainly the cost and time.

KEY WORDS: Electronic medical records, barriers, physician, family medicine

## Introduction

Electronic medical records (EMRs) are automated medicinal data frameworks that gather, store, and show tolerant data. They are a way to make neat and sorted out recordings and to get the clinical data about individual patients. Further, EMRs are expected to supplant existing (frequently paper-based) medicinal records, which are as of now natural to practitioners.[1] Tolerant records have been put away in paper structure for a considerable length of time and, over this

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time frame, they have devoured expanding space and quite deferred access to productive restorative consideration.[2] Interestingly, EMRs store singular patient clinical data electronically and empower moment accessibility of this data to all suppliers in the social insurance chain thus ought to help with giving reasonable and predictable consideration.

EMRs and electronic health records (EHRs) are seen as tradable equivalent words in most well-being informatics. Other comparable expressions exist but with an occasionally somewhat limited core interest. Although EMRs have a general spotlight on restorative consideration, electronic patient records (EPRs) and computerized patient records (CPRs) "contain clinical data around a patient from a specific doctor's facility" and electronic health care records (EHCRs) "contain a patient's well-being information."[3]

The apparent focal points of EMRs can be compressed as "upgrading the documentation of patient experiences, enhancing correspondence of data to doctors, enhancing access to patient therapeutic data, diminishment of blunders, advancing charging and enhancing repayment for

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administrations, framing an information store for exploration and quality change, and decrease of paper."[4] As EMRs are seen as having an awesome potential for enhancing quality. congruity, well-being, and proficiency in human services, they are being actualized over the world.

EMR's use in essential social insurance is turning out to be progressively critical. Be that as it may, the rate of EMR use among Saudi doctors stays low. Hindrances to EMR appropriation incorporate time commitments,[5] monetary costs,[6-8] and availability of specialized support. [6] As it obliges doctors to effectively back and utilize EMRs to profit to them, it is vital to comprehend the conceivable boundaries to their usage from the doctors' viewpoints along these lines The point of this study is to contemplate the essential obstructions in the reception of EMR among Saudi doctors.

# **Materials and Methods**

#### Sort of the Study

This study is a cross-sectional survey in Al-Hada Military Hospital in Taif City, which is situated in the western region of Saudi Arabia.

## Population of the Study

The study was directed in Taif City. Taif has been chosen in light of the fact that the examiner works in Al-Hada healing center, Taif. The city covers around 360 km2, with a populace of 885,400. It is the summer capital of Saudi Arabia; it is situated in the Western district, at a height of 6,000 feet over the ocean level. It is known for its pleasant calm atmosphere, green mountains, and natural air that made it the mid-year capital as it is used to be called. The therapeutic administrations are presented by three legislative divisions: Ministry of Health, Medical Services Department of Ministry of Defense and Aviation, and Medical Affairs of National Guard. The restorative administration is acquainted with individuals at three levels: essential social insurance, optional, and tertiary healing facilities. There are nine noteworthy administrative clinics; four of them are military healing facilities, the real one is Al-Hada Hospital at which the study will be conducted. Al-Hada Military Hospital is an optional consideration healing center with a limit of 350 beds. The healing center serves military work force and their wards that live in Taif City. In Al-Hada military healing center, there were 199 honing doctors at the time of the study, from January 2014 to February 2014.

## **Determination Criteria**

The inclusion criteria for the chosen candidates for the test in the study were practicing physicians, who showed interest, were present at the season of the study (not in the midst of a furlough or leave), and were working in Al-Hada Military Hospital in Taif City (barring visiting or locum doctor).

# **Inspecting Technique**

Simple irregular testing was used. As per the inclusion criteria, doctors' names and offices were acquired from

organization office and then an arbitrary rundown of enrolled doctors was made by SPSS v.12.

#### **Test Measure**

The example size depends on scope of blunder of a mean of (±5%) with 95% level of certainty. The figuring is made for a normal reaction rate of 80%, with aggregate populace of 199. The specimen size was figured by Sample Size Calculator® Software which is free online. The example size was figured to be 131.

#### Survey

A current, approved poll was used as the informationgathering apparatus. The survey is self-regulated, in English dialect; questionnaire comprised personal demographic variables, practical demographic variables, cost, information section, and usefulness variables. Ten occupant doctors produced a test-retest unwavering quality rate of >80% for everything over a 2-week interim. Six doctors with aptitude in medicinal informatics screened the survey for substance legitimacy. Twelve scholastic family doctors inspected the instrument for structure, clarity, and pertinence to test face legitimacy.

## **Study Stages**

The study stages can be separated into five stages: preparatory phase: 1 week, pilot study phase: 2 days, main study phase: 3 weeks, and data taking care of, examination and composing phase: 4 weeks.

#### **Preliminary Stage**

The period of this study began in April 2013 by selecting the point for the study after exchange with the boss. At that point, written audit was ready. The analyst arranged the survey with the assistance and guidance of boss and two counselors. Endorsement from the healing center organization was then acquired.

#### **Pilot Study Stage**

A pilot study was conducted on 10 family prescription inhabitant doctors who were arbitrarily chosen from the Joint Program of Family and Community Medicine, Jeddah. The advantage of the pilot concentrated on more preparation for the specialist, testing the comprehension of doctors to the poll, and rectifying it in like manner, knowing the normal time expected to fill the survey, which was around 4 min, knowing the assessment of doctors, and any expansion to the poll before doing the principle think about, and rebuilding the applicable variables appropriate for the measurable strategies to be utilized.

# **Fundamental Study Stage**

The primary study began from January 21, 2014 to February 8, 2014. As indicated by the inclusion criteria, the doctors were chosen by basic arbitrary way. The names and quantities of the objective gathering were obtained from the organization office. The surveys were given by and by to the head of each clinical office. The unfilled questionnaires were enclosed with "consent of interest" forms, which were dispersed among all rehearsing doctors by the leader of every office and then the filled forms were gathered in the same way. With each concerned office, the specialist used 5 minutes clarifying the motivation behind the study and the poll position amid the fundamental week after week gatherings.

#### **Data Handling**

Data assembled from the study tests were promptly coded, were registered, and entered in the personal computer (PC). Acknowledged reaction rate per poll was 80% or more. In that way, the member was permitted to miss reacting to maximum five questions in a poll with a specific end goal to incorporate it in the study. Something else, the lacking structures would be avoided and luckily, no structures were prohibited.

# **Data Analysis**

The scientist, using SPSS version 12, performed the investigation. Chi-square test was utilized for surveying between subjective variables and all the variables were subjective. *p*-Value equivalent or under 0.05 was considered measurably critical.

#### Result

## Sample Size and Response Rate

Of the 150 distributed questionnaires, 131 practicing physicians responded. The response rate was 87.3%. Some of the participants missed reporting some data. The data were analyzed according to the valid number of the participant under each category, which would be mentioned unless it was 131.

# Personal Demographic Characteristics of the Sample Sex

Of the 129 physicians, 107 were men who represented 83% of the total physicians whereas women represented only 17%. Male and female participants were found to differ significantly only in their major departments ( $\chi^2 = 27.2$ , df = 8, p = 0.001) and in average number of patients seen in the clinic per week ( $\chi^2 = 22.9$ , df = 3, p = 0.00).

# Age

Of the 127 participants, less than 10% were from the age group of 50 years and above. Other physicians were distributed almost equally among other age groups.

#### Job Position

The total number of the participants was 123. Most of them were residents (39%), followed by consultants (32%), and specialists (24%).

## Latest Qualification

Of the 130 participants who responded to this variable, 40 of them had their last qualification as MBBS which represents

31%, followed by board (25%), and then Master's degree (15%), diploma (10%), PhD (6%), and others.

## Latest Qualification Origin

The total number of the participants in this variable was 130. Forty-seven of them obtained their latest qualification from Saudi Arabia, which represent 36%, followed by other Arab countries and Europe which represent 25% and 23%, respectively. Qualifications from North America represent only 5% and the rest (11%) was distributed among other countries. Among the MBBS holders, 31 of 40 had obtained their degree from Saudi Arabia which represents 77.5%. Most of the board qualifications were obtained from Europe (42%), followed by Saudi Arabia (33%).

EMRs are too costly: The total number of participants was 129. Among them, 25 (19%) strongly agreed on the cost statement mentioned above, 32 (25%) agreed on it, 53 (41%) were unsure, 17 (13%) disagreed, and 2 (2%) strongly disagreed on the statement. All demographic variables including sex, age, job position, latest qualification, qualification origin, work department, average number of patients seen in the clinic per week, and computer technology use had no significant relation with the agreement of the participants on this statement [Tables 1 and 2].

Use of EMR is time-consuming: Twenty (15%) of the participants strongly agreed with this statement, 32 (24%) agreed with it, 23 (18%) were unsure, 41 (31%) disagreed, and 15 (12%) strongly disagreed with it. Age of the participants had significant effect on their level of agreement on this statement ( $\chi^2 = 33.7$ , df = 20, p = 0.028) whereas other demographic variables including sex, job position, latest qualification, qualification origin, work department, average number of patients seen in the clinic per week, and computer technology use had no significant effect on their agreement with that statement [Tables 3 and 4].

Easiness of data entry into EMR: Of the 129 participants, 39 (30%) strongly agreed to this statement, 48 (37%) agreed on it, 36 (28%) reported unsure, and 6 (5%) disagreed with it. Sex had significant effect on the agreement of the participants on this statement ( $\chi^2$  = 18.3, df = 4, p = 0.001). Work department as well had a significant effect on their agreement ( $\chi^2$  = 48.6, df = 32, p = 0.03). Age, job position, latest qualification, qualification origin, average number of patients seen in the clinic per week, and computer technology use by the participants had no significant effect on agreement of the participants with that statement [Tables 5 and 6].

## **Discussion**

There is an extensive variety of conceivable hindrances in executing EMRs, [9] which shows that specific classifications (financial, technical, and time) are all the more frequently recognized as boundaries to EMR appropriation than others (psychological, social, legal, organizational, and change process). We derive that the most as often as possible distinguished hindrances are "essential" boundaries, that is, they

Table 1: Agreement on EMR is too costly in relation to personal demographic characteristics

Characteristics		EMR is too costly				
		Strongly agree (%)	Agree (%)	Unsure (%) Disagree (%)		
Sex	Male	19 (18)	28 (27)	42 (40)	16 (15)	NC
	Female	6 (28)	4 (18)	10 (45)	2 (9)	NS
Age groups (years)	25-29	4 (17)	6 (26)	10 (44)	3 (13)	
	30-34	4 (16)	7 (28)	6 (24)	8 (32)	
	35–39	4 (17)	2 (9)	16 (70)	1 (4)	NS
	40-44	7 (28)	5 (20)	10 (40)	3 (12)	INS
	45-49	2 (12)	6 (35)	6 (35)	3 (18)	
	50 and above	3 (25)	5 (42)	3 (25)	1 (8)	
Job position	Resident	10 (21)	15 (31)	17 (35)	6 (13)	
	Specialist	7 (25)	6 (21)	12 (43)	3 (11)	NS
	Consultant	7 (18)	10 (26)	15 (40)	6 (16)	
	Others	1 (14)		4 (57)	2 (29)	
Latest qualification	MBBS	8 (20)	12 (30)	13 (33)	7 (17)	
	Diploma	4 (31)	4 (31)	5 (38)		
	Master's degree	3 (17)	3 (17)	12 (66)		NC
	PhD		5 (63)	3 (37)		NS
	Board	6 (19)	5 (16)	13 (40)	8 (25)	
	Other	4 (23)	3 (18)	7 (41)	3 (18)	
Qualifications origin	Saudi Arabia	8 (17)	11 (23)	20 (43)	8 (17)	
	Arab countries	5 (16)	10 (32)	13 (42)	3 (10)	NS
	Europe	3 (10)	11 (38)	9 (31)	6 (21)	
	North America	2 (29)		4 (57)	1 (14)	
	Other	7 (50)		6 (43)	1 (7)	

EMR, electronic medical record; NS.

Table 2: Agreement on EMRs is too costly in relation to practical demographic characteristics

		p-Value			
	Strongly agree (%)	Agree (%)	Unsure (%)	Disagree (%)	
Major department					
Medicine	3 (19)	3 (19)	8 (50)	2 (12)	
Surgery	2 (8)	6 (23)	13 (50)	5 (19)	
OBG	4 (40)	1 (10)	3 (30)	2 (20)	
Pediatrics	3 (17)	4 (22)	9 (50)	2 (11)	
Dentistry	2 (40)		2 (40)	1 (20)	NS
Family medicine	7 (21)	13 (40)	7 (21)	6 (18)	
Radiology	2 (50)	2 (50)			
Laboratory			2 (100)		
Other	2 (13)	3 (20)	9 (60)	1 (7)	
Average no. of patients seen in	the clinic per week				
Less than 50	7 (16)	14 (32)	15 (34)	8 (18)	
50–100	7 (22)	5 (15)	13 (41)	7 (22)	NO
More than 100	6 (25)	7 (29)	9 (38)	2 (8)	NS
Not applicable	5 (21)	5 (21)	12 (50)	2 (8)	
Computer technology use					
Complete	18 (18)	22 (23)	42 (43)	16 (16)	
Incomplete	7 (23)	10 (33)	11 (37)	2 (7)	NS

EMR, electronic medical record; NS,; OBG.

Table 3: Agreement on "EMR is time-consuming" in relation to personal demographic characteristics

Characteristics	EMR is time-consuming					
	Strongly agree (%)	Agree (%)	Unsure (%)	Disagree (%)	Strongly disagree (%)	
Sex					-	
Male	15 (14)	24 (22)	20 (19)	35 (33)	13 (12)	NS
Female	5 (23)	7 (32)	2 (9)	6 (27)	2 (9)	
Age groups (years)						
25–29	5 (22)	8 (35)	3 (13)	6 (26)	1 (4)	
30–34	2 (8)	6 (24)	4 (16)	6 (24)	7 (28)	
35–39	3 (12)	4 (17)	4 (17)	11 (46)	2 (8)	0.028
40-44	7 (28)	9 (36)	1 (4)	8 (32)		
45-49	1 (6)	2 (11)	7 (39)	4 (22)	4 (22)	
50 and above	2 (17)	2 (17)	3 (25)	4 (33)	1 (8)	
Job position						
Resident	8 (17)	13 (27)	7 (15)	15 (31)	5 (10)	
Specialist	3 (10)	8 (28)	4 (14)	9 (31)	5 (17)	NS
Consultant	7 (18)	8 (21)	9 (23)	11 (28)	4 (10)	
Others	2 (28)	2 (28)		3 (44)		
Latest qualification						
MBBS	6 (15)	13 (33)	6 (15)	10 (25)	5 (12)	
Diploma	2 (15)	5 (39)		4 (31)	2 (15)	
Master's degree	2 (10)	3 (16)	4 (21)	8 (43)	2 (10)	NS
PhD	1 (12)	2 (25)	2 (25)	2 (25)	1 (12)	
Board	7 (21)	7 (21)	8 (25)	9 (27)	2 (6)	
Other	2 (12)	2 (12)	3 (18)	7 (41)	3 (17)	
Qualifications origin						
Saudi Arabia	8 (17)	14 (30)	8 (17)	11 (23)	6 (13)	
Arab countries	3 (9)	10 (31)	5 (16)	11 (35)	3 (9)	NS
Europe						NO
North America						
Other	5 (17)	5 (17)	6 (20)	11 (36)	3 (10)	

EMR, electronic medical record; NS.

are the first to emerge when doctors are confronted with EMRs. At the end of the day, EMRs are frequently experienced by doctors as dangers to budgetary, specialized, or tedious to faculties.

The "money-related" class of obstructions incorporates those identified with the financial issues required in actualizing EMRs. The fiscal viewpoint was an imperative component for some doctors. The inquiries ordinarily confronting doctors are whether the expenses of executing and running an EMR framework are reasonable and whether they can pick up a money-related advantage from it. The expenses of an EMR framework can be divided into two: start-up expenses and continuous expenses. A few scientists do not recognize particular sort of expenses in their concentrates; however, it appears to be sheltered to accept that these two sorts of expenses are incorporated into these studies subsequent to executing an EMR framework is perceived as a mind-boggling

process with a few phases including acquiring, planning, checking, redesigning, and administration costs.

Around 44% of the members think that EMRs are too exorbitant, 41% were uncertain, and 15% do not think so. This general impression of high cost of EMRs was noted by numerous other studies. [10,11] EMRs might be considered as more practical for bigger associations with bigger capital spending plans and powerful data innovation emotionally supportive networks. [10] This is the situation in our setting following the monetary allowance of introducing, running, and keeping up EMR framework will be paid by the legislature.

A familiar work process is critical to the work of doctors. The presentation of EMRs will moderate a doctor's work process, as it will dependably prompt extra time being required to choose, actualize, and figure out how to utilize EMRs, and after that to enter information into the framework. Thus, their profitability will be diminished and their workload will be

Table 4: Agreement on "EMR is time-consuming "in relation to practical demographic characteristics

Characteristics	EMR is time consuming					
	Strongly agree (%)	Agree (%)	Unsure (%)	Disagree (%)	Strongly disagree (%)	-
Major department						
Medicine	3 (19)	2 (13)	5 (31)	5 (31)	1 (6)	
Surgery	3 (11)	6 (22)	5 (19)	9 (33)	4 (15)	
OBG	1 (10)	6 (60)	2 (20)	1 (10)		
Pediatrics	4 (22)	5 (28)	1 (20)	7 (39)	2 (11)	NS
Dentistry	4 (12)	12 (37)	4 (12)	3 (60)	1 (20)	INO
Family medicine				8 (24)	5 (15)	
Radiology	2 (50)		1 (25)			
Laboratory	1 (50)		1 (50)	1 (25)		
Other	2 (13)	1 (6)	4 (25)	7 (43)	2 (13)	
Average no. of patients	s seen in the clinic per we	ek				
Less than 50	7 (16)	9 (20)	10 (22)	13 (29)	6 (13)	
50-100	6 (19)	9 (28)	4 (12)	9 (28)	4 (12)	NS
More than 100	4 (16)	8 (32)	3 (12)	9 (36)	1 (4)	
Not applicable	2 (8)	5 (21)	5 (21)	8 (33)	4 (17)	
Computer technology (	use					
Complete	12 (12)	24 (24)	19 (19)	33 (33)	12 (12)	NS
Incomplete	8 (27)	8 (27)	4 (13)	8 (27)	2 (6)	

Table 5: Agreement on easiness of data entry into EMR in relation to personal demographic characteristics

Characteristics	Easiness of data entry into EMR					
	Strongly agree (%)	Agree (%)	Unsure (%)	Disagree (%)	— p-Value	
Sex						
Male	32 (30)	46 (43)	24 (23)	4 (4)	0.001	
Female	7 (32)	2 (9)	12 (55)	1 (4)		
Age groups (years)						
25–29	7 (30)	8 (35)	5 (22)	3 (13)		
30–34	6 (24)	10 (40)	7 (28)	2 (8)		
35–39	8 (35)	9 (39)	6 (26)		NS	
40–44	9 (36)	8 (32)	8 (32)			
45–49	7 (41)	5 (29)	4 (24)	1 (6)		
50 and above	1 (8)	8 (67)	3 (25)			
Job position						
Resident	13 (27)	18 (38)	13 (27)	4 (8)		
Specialist	8 (28)	8 (28)	12 (41)	1 (3)	NS	
Consultant	11 (29)	17 (45)	9 (24)	1 (2)		
Others	5 (71)	2 (29)				
Latest qualification						
MBBS	11 (28)	16 (40)	10 (25)	3 (7)		
Diploma	7 (54)	2 (15)	4 (31)			
Master's degree	5 (26)	9 (47)	4 (21)	1 (5)	NS	
PhD	1 (14)	3 (43)	3 (43)			
Board	10 (31)	10 (31)	11 (35)	1 (3)		
Other	5 (29)	7 (41)	4 (24)	1 (6)		
Qualifications origin						
Saudi Arabia	13 (28)	12 (26)	17 (36)	5 (10)		
Arab countries	12 (37)	15 (47)	5 (16)		NS	
Europe	9 (32)	11 (39)	7 (25)	1 (4)	INO	
North America	1 (14)	3 (43)	3 (43)			
Other	4 (29)	6 (42)	4 (29)			

EMR, electronic medical record; NS.

Table 6: Agreement on easiness of data entry into EMR in relation to practical demographic characteristics

Characteristics	Easiness of data entry into EMR				
	Strongly agree (%)	Agree (%)	Unsure (%)	Disagree (%)	-
Major department					
Medicine	3 (19)	4 (25)	8 (50)	1 (6)	
Surgery	10 (37)	12 (44)	5 (19)		
OBG		1 (11)	8 (89)		
Pediatrics	4 (22)	8 (44)	3 (17)	3 (17)	0.03
Dentistry	2 (40)	4 (80)	1 (20)		0.03
Family medicine	11 (34)	12 (38)	7 (22)	2 (6)	
Radiology	3 (75)		1 (25)		
Laboratory	1 (50)		1 (50)		
Other	7 (44)	7 (44)	2 (12)		
Average no. of patients seen in th	ne clinic per week				
Less than 50	12 (27)	21 (47)	10 (22)	2 (4)	
50-100	10 (32)	12 (39)	7 (23)	2 (6)	NS
More than 100	7 (28)	6 (24)	11 (44)	1 (4)	
Not applicable	9 (39)	7 (31)	6 (26)	1 (4)	
Computer technology use					
Complete	30 (31)	34 (34)	30 (31)	4 (4)	
Incomplete	9 (30)	13 (44)	6 (20)	2 (6)	NS

EMR, electronic medical record; NS,; OBG.

expanded. This can bring about monetary issues, for example, lost income.

The shrouded backhanded cost that worries doctors is the time. In our study, 39% of the members were found to feel that use of EMRs is tedious, whereas 43% did not feel so, and 18% were uncertain. This obscure result vet bolsters the worry of doctors everywhere throughout the world with respect to the time restriction to utilize EMRs as showed by numerous studies.[12,13] Age of the members in our study was found to influence that discernment. It might be clarified that youthful age gatherings were more talented in taking care of PC innovation. That might be brought about by its simple accessibility for them in contrast with the more established eras and the late group observation and the development toward using PC innovation as a part of day to day life.

EMRs are hello there tech frameworks and, accordingly, incorporate complex equipment and programming. A specific level of PC aptitudes by both suppliers and clients (the doctors) is required. Further, there are still some specialized issues with EMRs, which prompt grumblings from doctors, and they should be moved forward. Accordingly, obstructions exist identified with the specialized issues of the frameworks, the specialized capacities of the doctors and of the suppliers. which are assembled in this second class.

Our information showed that 67% of the members thought that information passage into EMR is simple, whereas 28% were not certain about it, and just 5% did not think so. It is eminent that reaction by vulnerability has topped in this issue. This most likely on account of that this issue is still a visually impaired range for some members and would be clearer through genuine practice. Our information likewise demonstrated that sex and employment bureau of the members had real impact on their convictions in such manner. The majority of female members were from OBG office where occupied clinical work renders no time for administrative work. This may clarify impact of sex and occupied work divisions on convictions of the members in this issue.

Our outcome was near Indiana's outcome, which indicated that 55% of the members thought that passage of information was simple in current EMR.[10] That makes information passage a sympathy toward doctors, particularly when clinical practice requires quick pace, distinctive aptitudes, and keeping an extensive record. Those variables were found to make passage of information, the biggest potential hindrance to the successful utilization of PCs in medicinal field.[12,13]

The paper breaks down the explanations for the generally low appropriation rate of EMRs among doctors. Actualizing an EMR framework plainly changes the work process in a therapeutic practice. In addition, an EMR usage is a noteworthy change that is felt all through the practice; it requests corresponding alterations and development in different perspectives, for example, to the structure and culture of a practice. The discoveries of this study can be utilized as a diagram of hindrances that doctors may perhaps find in the EMR usage process and, all things considered, could be significant for EMR policymakers and implementers. The study shows that policymakers ought to be more mindful of the truth that expelling specialized, time and money-related, hindrances is obligatory to guarantee the acknowledgment of the guarantees of EMR.

# Conclusion

Generally, the hindrances of Al-Hada Military Hospital doctors toward the implementation of computerization of restorative records are basically expense and time.

#### References

- 1. McLane S. Designing an EMR planning process based on staff attitudes toward and opinions about computers in healthcare. Comput Inform Nurs 2005;23(2):85-92.
- 2. Da've D. Benefits and barriers to EMR implementation. Caring 2004;23(11):50-1.
- 3. Häyrinen K, Saranto K, Nykänen P. Definition, structure, content, use and impacts of electronic health records: a review of the research literature. Int J Med Inform 2008;77(5):291-304.
- 4. Yamamoto LG, Khan ANGA. Challenges of electronic medical record implementation in the emergency department. Pediatr Emerg Care 2006;22(3):184-91; guiz 192.
- Miller RH, Sim I. Physicians' use of electronic medical records: barriers and solutions. Health Aff (Millwood) 2004;23(2):116-26.
- Simon SR, Kaushal R, Cleary PD, Jenter CA, Volk LA, Poon EG, et al. Correlates of electronic health record adoption in office practices: a statewide survey. J Am Med Inform Assoc 2007;14(1):110-7.

- 7. Valdes I, Kibbe DC, Tolleson G, Kunik ME, Petersen LA. Barriers to proliferation of electronic medical records. Inform Prim Care 2004:12(1):3-9.
- 8. Gans D, Kralewski J, Hammons T, Dowd B. Medical groups' adoption of electronic health records and information systems. Health Aff (Millwood) 2005;24(5):1323-33.
- 9. Boonstra A, Broekhuis M. Barriers to the acceptance of electronic medical records by physicians from systematic review to taxonomy and interventions. BMC Health Serv Res 2010;10:231.
- 10. Loomis GA, Ries JS, Saywell RM, Thakker NR. If electronic medical records are so great, why aren't family physicians using them? J Fam Pract [Internet] 2002;51(7):636-41.
- 11. Lindberg DA, Humphreys BL. Medical informatics. JAMA 1996;275(23):1821–2.
- 12. McDonald CJ. The barriers to electronic medical record systems and how to overcome them. J Am Med Inform Assoc 1997;4(3):213-21.
- Musham C, Ornstein SM, Jenkins RG. Family practice educators' perceptions of computer-based patient records. Fam Med 1995;27(9):571-5.

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