



Research Article

ISSN : 2277-3657  
CODEN(USA) : IJPRPM

## ***Frequency of medical errors complaints against medical health centers in Al Madinah Al Munawarah region of Kingdom of Saudi Arabia***

***Abdulhadi Hessen Al-mazroea<sup>1</sup>, Abdulrahman Mohammad Alturki<sup>2</sup>***

*<sup>1</sup>Taibah university, Medical college, pediatrics department*

*<sup>2</sup>Medical student at Taibah university, Medical college*

---

### **ABSTRACT**

**Background:** Considering the evolution of healthcare services in Al Madinah Al Munawarah region of Kingdom of Saudi Arabia during three years 1434-1436H (2013-2015), there has been an increase in medical errors. Medical errors are a significant universal dilemma and may cause serious medical complications for many of patients, little of which we know about. **Objective:** The aim of this systematic review was to examine the complaints regarding medical errors in Al Madinah Al Munawarah region. **Methods:** The data received were raw figures demonstrates a census of all claims presented to different committees in Al Madinah general health directorate over three consequent years **2012- 2013- 2014.** **Results:** Data analysis revealed from the total number of presented claims (109), there were 27 final verdicts of accusation, and 82 of non-medical errors. Results in this study showed that the highest drug errors claims in Al Madinah region originated from departments of obstetrics and gynaecology, paediatrics and internal medicine followed by surgery, emergency, orthopedics, nursing, urology, dental, anaesthesia, pediatric surgery, ophthalmology, rehabilitation center, red crescent, administration and finally neurosurgery, respectively. **Conclusions:** Obstetrics and gynaecology, paediatrics and internal medicine were the most affected departments with the highest prevalence of medication error complaints in Al Madinah region.

**Keywords:** *medical errors, Al Madinah, medical health*

---

### **INTRODUCTION**

The wise use of medications is a vital part in seeking health process. On the other hand, healthcare providers face many hindrances while maintaining the patients' and inpatients' safety and the most obvious one is medication error. The errors in medication are preventable as defined by Prevention (NCC MERP) organization and the National Coordinating Council for Medication Error Reporting (1). The inpatients are more susceptible to medication errors (2) and higher cost of patient care. Also, medication errors could result in increasing the hospital stay length, magnifying the rate of patient's mortality as well as increasing the costs of laboratory and pharmacy (3).

The major preventable health risk factor is errors came from medication and its adverse events with a high incidence in many epidemiologic studies, predominantly in the setting of developed country (4, 5).

The overall studies on the incidence of medical errors and ADEs in Saudi Arabia are scarce. In a study, Alhjjajin 1996 discussed the effects and risk factors for malpractice in medications and studied the rules for medical practice regulation in Saudi Arabia (6). Also the records of Medico-legal Committees (MLC) showed the trends of medication errors claims and were presented in the Alsiddique review in Kingdom of Saudi Arabia over a 4-year period from 1999 to 2002(7). The authors found that the obstetrics followed by general surgery, internal medicine and pediatrics showed the most common types of medication errors. In addition, other studies that was conducted in different

provinces in KSA showed similar frequency of medication liability claims in obstetrics and surgery setting(8, 9).However, the study of Samarkand showed the individual malpractice claims in the anesthesia setting were more prevalent in the private sectors and Ministry of Health services(10).

Incidence of prescribing error in hospitalized patients were 8–56 per 100 medication orders (11, 12). The upgraded technology, well training although the progress in experience of medical practitioners have resulted in a significant improvement in both private and governmental sectors over the past two decades regarding to the Health Care Services in Saudi Arabia. This resulted in higher developments of medical practice litigations that could be reflected by the frequency of complaints and claims against health care providers (3, 8, 13). Thus this systematic review was conducted to examine the complaints regarding medical errors in Madinah region.

## **MATERIAL AND METHOD**

Study design was systematic review and the data of the present study were obtained from the official annual reports of Legal Health Organization. The received data were raw graphs that established a survey of all claims presented to different working group in Al Madinah general health directorate over 3 consequent years 2012- 2014. The total number of existing claims was 109 and the Final verdict of accusation was only 27.

## **RESULTS AND DISCUSSION**

According to the data that collected in Table 1, from a total number of presented claims (109), there were 27 final verdicts of accusation, and 82 of non-medical errors. Which indicate 75% increase in non-medical errors between 2012 to 2014 (from 109 claims) (Figure. 1).

As shown in figure 2, the most common errors were in operating room (33.27%), followed by 25% in ICU, 22.5% emergency room, 14.23% in delivery room and 5% in the outpatient department.

According to the data that presented in Table 2, the present results showed that the highest number of claims in Al Madinah region were the specialists of obstetrics and gynaecology, paediatrics and internal medicine followed by surgery, emergency, orthopaedics, nursing, urology, dental, anaesthesia, paediatric surgery, ophthalmology, rehabilitation center, red crescent, administration, and neurosurgery, respectively.

In an attempt to improve the defining standards of quality, this study illustrates the medico-legal obstetrics claims in Al Madinah Al Munawarah region –Kingdom of Saudi Arabia. That means many problems in obstetrics usually result from the lack of competence, which may harm pregnant women and their fetus.

Also, most of the potential problems of the medical section according to sample study were found in the obstetrics due to the low competence that considered as a risk factor for pregnant women as well as the fetus(7). In consistence, the final distribution of verdicts between many clinical specialties showed that obstetrics and gynecology take the lead with a mean percentage of 25.5% in period between (2012–2014), followed by the practice of general surgery with a mean percentage of 13.8%(8).Recently, the obstetrical litigation in Saudi Arabia is a growing problem, particularly in the small cities as the resources and facilities are scarce(8). Also, studies in last years provided information about Obstetrics because this specialty is commonly considered as a high risk of litigation (14).

For paediatrics, 26 of the claims (23.8% percent) from the total number of presented claims (109), the paediatrics was the high effect by medical errors in Medinah region over 3 years (2012-2013-2014). In 26 claims for paediatrics, there was 5 of these claims for verdict accusation and 21 for non-medical errors.

In consistence, paediatric patients were more affected by medication error when occurring than other patients and have a higher risk of death than adults (15). Many risk factors could result in medication errors in children including age and weight variations, the properties and pharmacokinetics of medications are rapidly changing in children, high intra-patient variability, and the frequent use of "off-label" indications in children (16-18).

Also, for Internal Medicine, 23 of the claims (21.1% percent) from the total number of presented claims (109), the paediatrics was the effect of medical errors in Medinah region over 3 years (2012-2013-2014). In 23 claims for Internal Medicine, 3 of these claims were for verdict accusation and 20 for non-medical errors.

The study sample comprised of eleven working hospitals in Al Madinah region, Kingdom of Saudi Arabia, during the period of (2012-2014). According to the present study for medical centers in Al Madinah region for three years, the highest rate of submitted claims was from King Fahad Hospital and MMCH were 35 and 32 claims respectively, followed by Ohud General Hospital (17 claims), Khiaber General Hospital (5 claims), Al-Henakiah General Hospital (5 claims), Al Ansar Hospital (4 claims), Yanbu Hospital (3 claims), Prince Abdalmohsen Hospital (2 claims)

respectively. Also, the highest final verdict of accusation was investigated by Mmch Medical center follow by King Fahad Hospital (10 and 8) respectively. For Non-medical errors, the highest rate was presented in King Fahad Hospital. The outcomes of errors of patient's health showed no harmful effects on 70.3% of patients. However, in 13.6% of patients showed hospital stay increase, 10% had higher risks of infectious diseases, 3.1% showed higher risks of disease morbidity and 3% increased the mortality rate (Figure. 3).

#### **Tables:**

**Table 1.** The number of presented claims, final verdict of accusation and non-medical error in Mdinah region over 3 years (1434-1435-1436).

Total number of presented claims	Final verdict of accusation	NO-medical errors
109	27	82
100%	24.7%	75.3%

Table 2: The number of presented claims, final verdict of accusation and non-medical error for each medical specialty in Madinah region over three years (1434-1435-1436H).

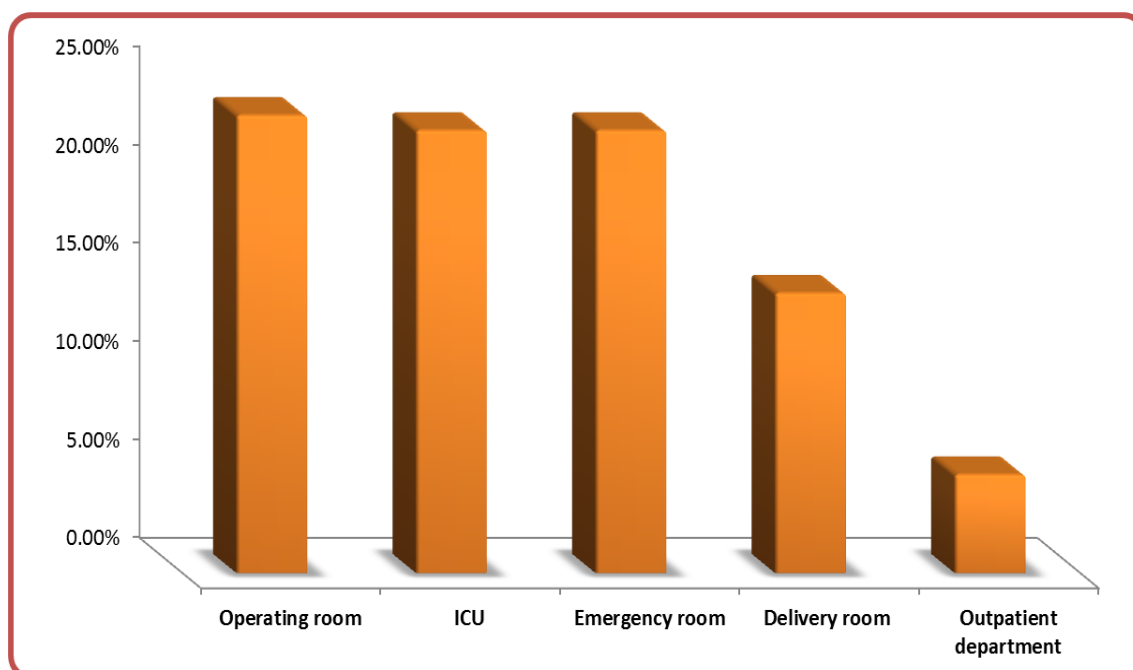
Medical specialty	Total number of presented claims	Final verdict of accusation	NO-medical errors
<b>Obstetrics And Gynecology</b>	27	7	20
<b>Pediatrics</b>	26	5	21
<b>Internal Medicine</b>	23	3	20
<b>General Surgery</b>	6	3	3
<b>Emergency</b>	5	0	5
<b>Orthopedics</b>	8	1	7
<b>Nursing</b>	4	2	2
<b>Urology</b>	2	2	0
<b>Dental</b>	2	0	2
<b>Anesthesia</b>	1	0	1
<b>Pediatric Surgery</b>	1	0	1
<b>Ophthalmology</b>	1	0	1
<b>Rehabilitation Center</b>	1	1	0
<b>Red Crescent</b>	1	1	0
<b>Administration</b>	1	1	0
<b>Neurosurgery</b>	3	1	2

Table 3: The number of presented claims, final verdict of accusation and non-medical error for each medical center in Medinah region over three years (2012-2013-2014).

Medical center	Total number of presented claims	Final verdict of accusation	Non-medical errors
King Fahad Hospital	35	8	27

Mmch	32	10	22
Ohud General Hospital	17	2	15
Khiaber General Hospital	5	2	3
Al-Henakiah General Hospital	5	1	4
Al Ansar Hospital	4	1	3
Yanbu Hospital	3	0	3
Prince Abdalmohsen Hospital	2	1	1
Al Zahraa Private Hospital	1	0	1
Saudi German Hospital	2	0	2
Al dar dispensary Rehabilitation center Phcc Al migat hospital Al eias hospital	1 for each center	0	1 for each center

**Figures:**



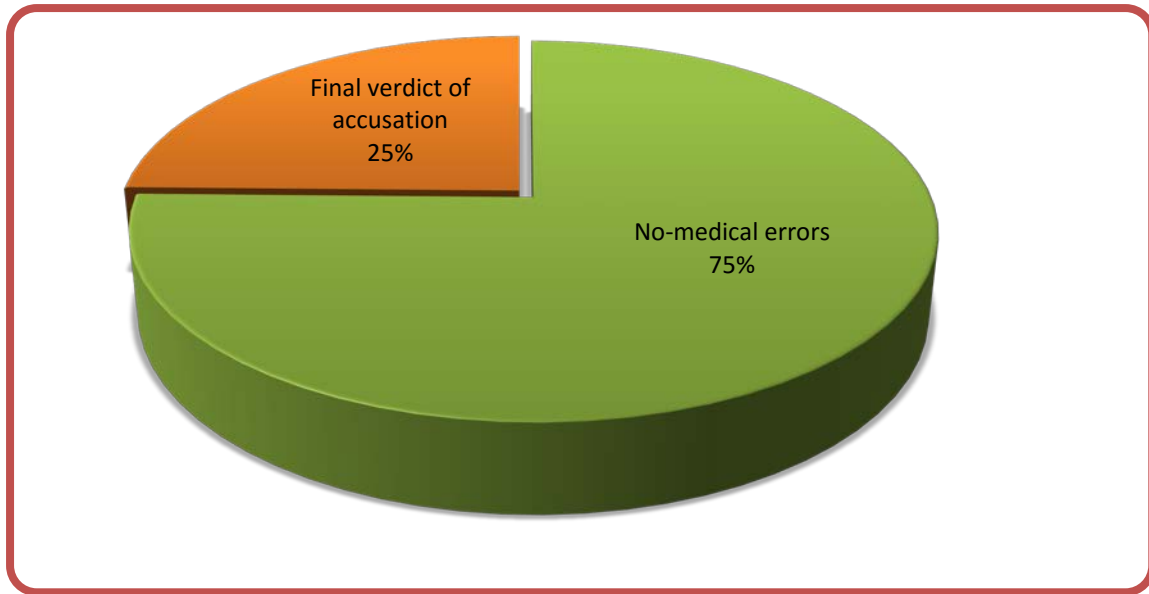
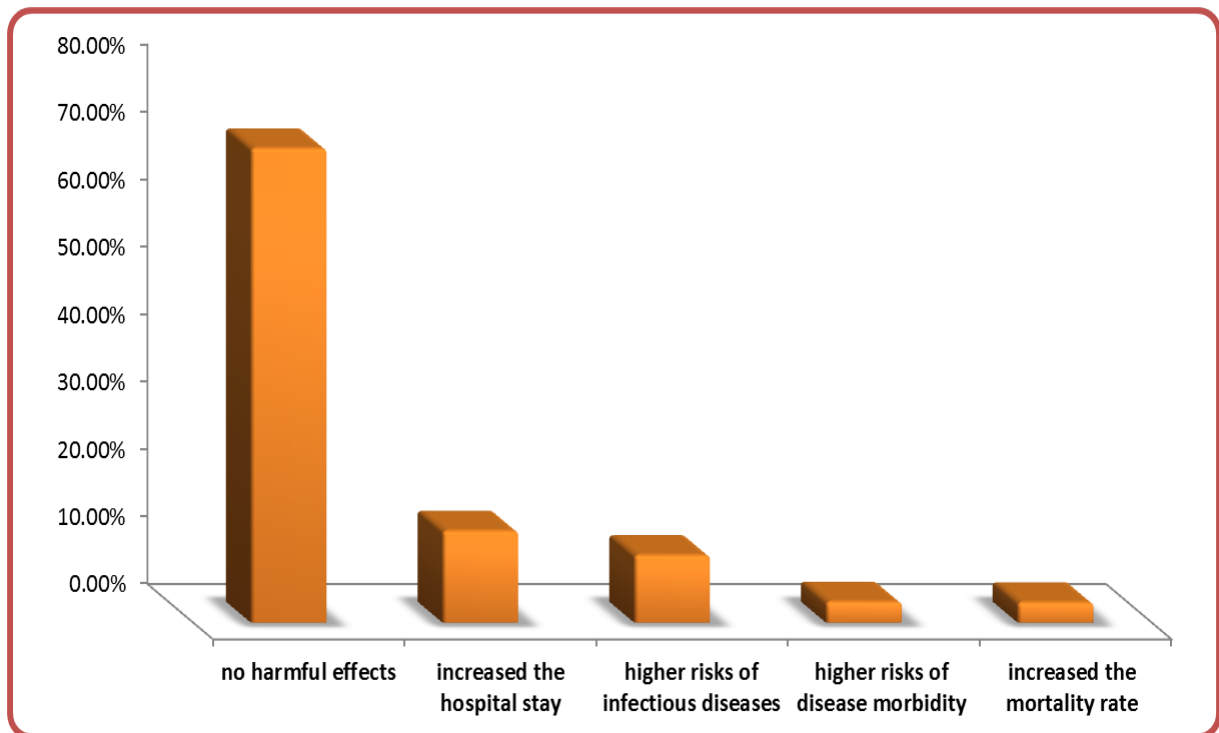


Figure1. The percentage of final verdict of accusation and no-medical errors from total number presented claims.



**CONCLUSION**

It is evident that the Obstetrics and gynecology, pediatrics and internal medicine are the most affected departments in Al Madinah region by medical errors. Also, King Fahad Hospital has the highest number of claims submitted against medical errors.

Accordingly, there is an indispensable must for improvement in the litigations and documentation process.

**REFERENCES.**

1. NCC-MERP. The National Coordinating Council for Medication Error Reporting and Prevention: Moving into the Second Decade website: NCC MERP. Available at: [http://www.nccmerp.org/sites/default/files/fifteen\\_year\\_report.pdf](http://www.nccmerp.org/sites/default/files/fifteen_year_report.pdf). 2010.
2. Classen DC, Jaser L, Budnitz DS. Adverse drug events among hospitalized Medicare patients: epidemiology and national estimates from a new approach to surveillance. *Joint Commission journal on quality and patient safety*. 2010;36(1):12-21.
3. Aljarallah JS, Alrowaiss N. The pattern of medical errors and litigation against doctors in Saudi Arabia. *Journal of family & community medicine*. 2013;20(2):98-105.
4. Morimoto T, Sakuma M, Matsui K, Kuramoto N, Toshiro J, Murakami J, et al. Incidence of adverse drug events and medication errors in Japan: the JADE study. *J Gen Intern Med*. 2011;26(2):148-53.
5. Benkirane RR, Abouqal R, Haimeur CC, SS SECEK, Azzouzi AA, Mdaghri Alaoui AA, et al. Incidence of adverse drug events and medication errors in intensive care units: a prospective multicenter study. *Journal of patient safety*. 2009;5(1):16-22.
6. Al-Hajjaj MS. Medical practice in Saudi Arabia the medico-legal aspect. *Saudi medical journal*. 1996;17(1):1-4.
7. Alsaddique AA. Medical liability. The dilemma of litigations. *Saudi medical journal*. 2004;25(7):901-6.
8. Al-Saeed AH. Medical liability litigation in Saudi Arabia. *Saudi J Anaesth*. 2010;4(3):122-6.
9. Al-Saeed A. Status of medical liability claims in Saudi Arabia. *Saudi Journal of Anaesthesia*. 2007;1(1):4.
10. Samarkandi A. Medico-legal liabilities of anesthesia practice in Saudi Arabia. *Middle East journal of anaesthesiology*. 2006;18(4):693-706.
11. Al-Dhawailie AA. Inpatient prescribing errors and pharmacist intervention at a teaching hospital in Saudi Arabia. *Saudi pharmaceutical journal : SPJ : the official publication of the Saudi Pharmaceutical Society*. 2011;19(3):193-6.
12. Al-Jeraisy MI, Alanazi MQ, Abolfotouh MA. Medication prescribing errors in a pediatric inpatient tertiary care setting in Saudi Arabia. *BMC research notes*. 2011;4:294.
13. Samarkandi A. Status of medical liability claims in Saudi Arabia. *Ann Saudi Med*. 2006;26(2):87-91.
14. Ghaffar UB, Ahmed SM, Faraz A. A REVIEW OF THE FREQUENCY OF MEDICAL ERROR IN SAUDI ARABIA: AN EMERGING CONCERN. *J of Evidence Based Med & Hlthcare*. 2015;2(52):8692-5.
15. Phillips J, Beam S, Brinker A, Holquist C, Honig P, Lee LY, et al. Retrospective analysis of mortalities associated with medication errors. *American journal of health-system pharmacy : AJHP : official journal of the American Society of Health-System Pharmacists*. 2001;58(19):1835-41.
16. Peth HA, Jr. Medication errors in the emergency department: a systems approach to minimizing risk. *Emergency medicine clinics of North America*. 2003;21(1):141-58.
17. Kozler E, Berkovitch M, Koren G. Medication errors in children. *Pediatric clinics of North America*. 2006;53(6):1155-68.
18. Lesar TS. Tenfold medication dose prescribing errors. *The Annals of pharmacotherapy*. 2002;36(12):1833-9.