

## A REVIEW OF THE FREQUENCY OF MEDICAL ERROR IN SAUDI ARABIA: AN EMERGING CONCERN

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### ABSTRACT

#### BACKGROUND

Medical error is a continuing global phenomenon. It represents an important public health problem that poses a serious threat to patient safety. Since the time when doctors had been blindly trusted for their clinical acumen, in recent times most of them have been frequently questioned on all aspects of patients' care clearly indicating that in certain circumstances, even their motives are not beyond reproach.

#### OBJECTIVE

To assess the frequency of the medical errors and to devise workable solutions and prevention strategies in Saudi Arabia.

#### METHODOLOGY

This paper critically reviews the literature on medical error, data compiled from Medico-Legal Committee (MLC) of Ministry of Health (MOH) portal, of different regions of Kingdom of Saudi Arabia and to identify key sources of errors in primary care.

#### CONCLUSION

A critical approach to bringing wide ranging changes in medical education, communication skills and evidence based practice that can reduce the risk of errors and adverse outcomes in patient care.

There is a growing public perception that serious medical error is commonplace and largely tolerated by the medical profession. The Government and Medical establishments' response to this perceived epidemic of error has included tighter controls over practicing doctors and individual stick-and-carrot reforms of medical practice. There is a growing public perception that serious medical error is commonplace and largely tolerated by the medical profession.

#### KEYWORDS

Medical error, Saudi Arabia, Medicolegal Committee.

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**INTRODUCTION:** Medical error has become a bane for the practicing healthcare professional primarily may be due to increase in the number of patients seen as compared to earlier times when such was not the case. Such a case can be attributed to a country like Saudi Arabia that has strived to upgrade its medical facilities, technologies and human resources to face an increased number of patient care.<sup>1</sup> Subsequently the immediate need to reduce consultation time so that more patients can be accommodated is leading to unintentional patient harm.<sup>2</sup> This is generally termed as Medical Error (ME) and is defined as "an unintended injury that is caused by medical management resulting in measurable disability".<sup>3,4</sup>

The World Health Organization (WHO) termed it as "an endemic concern" determining that at least one out of 10 patients are affected due to medical error around the world.<sup>5</sup>

Since the beginning of this century there has been regular reports being published regarding the preventable mortality and morbidity due to medical error. This has ranged from an established 44,000 to 98,000 preventable deaths and 1,000,000 excess injuries each year in U.S. hospitals with an additional burden of extra medical costs incurred by preventable drug related injuries approximated \$887 million to an estimated 850,000 medical errors (2000) each year in UK alone costing over £2 billion.<sup>6</sup> A follow up study in 2006 discovered that medication errors are among the most common medical mistakes, harming at least 1.5 million people every year.<sup>7</sup>

James, et al in their study pointed out that most of the medical errors that physicians should look out for is related to complexity of modern education, tendency to apply cause and effect to random association and first intuition bias.<sup>8</sup> Macfie, et al proposed in their article that to reduce such errors a practice of computerized prescribing, updating knowledge and input by a pharmacist is quite necessary.<sup>9</sup>

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**REVIEW OF LITERATURE:** Multiple studies have shown that medical negligence causes enough death and disability to be of major concern to healthcare professionals and policy makers.<sup>10,11</sup> Certain other articles have researched on iatrogenic events due to medical intervention which were not explained by any diseases pointing out that such incidences ranged from 3.2%-6.5%.<sup>12</sup> Quite a few research papers published, focused on the physician's knowledge and practice of reporting medical errors.<sup>12-15</sup>

Most of the literatures reviewed for this study could not lend themselves to a statistical analysis based on the parameters required to assess the frequency, causes and outcome of errors caused due to medical intervention at levels ranging from those occurring at the level of private practice to tertiary care centers. An attempt was made to provide a collective analysis by integrating all the articles included in this study and presenting it as a critical review.

**METHODOLOGY:** This study has used the integrative method of reviewing the ME cases and summarizing its result to provide a more comprehensive understanding of the problems in medical care leading to medical errors. This review has been structured on the basis of the five step review framework as given by Whittemore, et al.<sup>16</sup>

- **Problem identification:** The aim of this study is to identify the frequency of medical errors that occur during a medical consultation, the factors favoring it and to recommend ways and means to reduce it to an acceptable level.
- **Literature search:** For effective review all the cases that have been submitted to the Medico Legal Committee in Saudi Arabia from 2007 to 2014 have been taken into consideration through data search using MeSH terms like medication errors, critical care, clinical prescription, adverse event, medical reporting, and drug prescription etc.<sup>17</sup>

- **Data evaluation:** This included finding out the frequency of medical errors reported or referred to the Medico Legal Committee and how many were resolved or remained unsolved during that same period.

All those information were excluded from the study which were incomplete or did not fulfill the criteria of the process of complete review by the Medico Legal Committee.

- **Data extraction, synthesis and analysis:** All the relevant data were extracted from those reports that fulfilled the eligibility criteria and a table was prepared (Table – 1) for analysis purpose. A qualitative analysis was done to find out the frequency of the ME cases reported and those resolved amicably within that region. This was then compared with the research done on medical error in Saudi Arabia to present a comparative analysis on its importance to the medical fraternity.

- **Presentation of Results:** The analyzed data was presented in a tabular and narrative form subsequently.

**RESULT AND DISCUSSION:** The analysis showed an increasing trend of medical error reporting from 2007 to 2013 (Table – 1). Conversely, the number of verdicts reached to resolve these errors showed a decline of almost 10% from 2007 (45.5%) to 2013 (35.8%). This can be explained on the basis that more and more number of patients are becoming aware of the standards of medical care and demanding redressal.<sup>18</sup> A study of research articles showed how these errors were more common in surgical specialties (56.7%) than non-surgical specialties (44.3%).<sup>19</sup> Studies have shown that the factors leading to medical error ranged from high volume practice, poor sign-out practices, absence of close monitoring of high-risk patients, lack of teamwork, communication gap between healthcare workers and patients, lack of strong leadership and superficial backup and consultation.<sup>20</sup>

Year	Total cases referred	Region with highest	Resolved cases	Total sessions	%
2013 (1434)	2413	Riyadh (487)	864	2838	35.8%
2012 (1433)	2002	Riyadh (478)	672	2674	33.5%
2011 (1432)	1777	Makkah (489)	734	2441	41.3%
2010 (1431)	1758	Riyadh (430)	735	2302	41.8%
2009 (1430)	1510	Riyadh (323)	670	1802	44.3%
2008 (1429)	1356	Jeddah (287)	650	1598	47.9%
2007 (1428)	1165	Jeddah (293)	531	1324	45.5%

**Table 1: Cases submitted to the Medico-Legal Committee across different regions of Kingdom of Saudi Arabia (25)**

As far as the involvement of healthcare workers in litigation was concerned Basem Y, et al<sup>21</sup> in their study showed that 90% were physicians and 7.6% were nurses while most of the incidence of medical errors occurred in the Ministry of Health (MoH), institutions (80.2%) while the rest (19.8%) in the private sector.

Similarly, an article by Alsaddique, et al<sup>22</sup> implicated the Department of Obstetrics as generating most of the medical error reporting (27%) followed by the Department of

General Surgery (17%) in cities like Jeddah followed by Dammam.

These hospitals and small clinics then became victim to litigations due to medical error and some factors that can be implicated are under – trained physicians and surgeons, under – staffed hospitals, lack of equipment etc. leading to sub-optimal performances.<sup>23</sup> To protect the doctors and healthcare professionals from litigations either legal or frivolous, the Saudi Commission for Health Specialties has

made medical liability insurance a pre-requisite for registration of medical licenses.<sup>24</sup>

Most importantly multiple studies have concluded that adhering to the standards of medical practices of any particular country is the best way to avoid medical litigation due to medical error.<sup>25-29</sup>

**CONCLUSION:** Taking into consideration the various causes of medical errors cited above it is imperative that healthcare professionals keep in mind the regulations and guidelines while practicing healthcare. This can only be achieved through a multi-pronged approach that includes regular training programs, updating clinical knowledge, maintaining adequate clinical staff and other allied healthcare workforce, improving communication skills, proper distribution of shifts and follow up of prescription by the medical pharmacists.

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