

## The pattern of medical errors and litigation against doctors in Saudi Arabia

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ABSTRACT

**Background:** Adverse events are frequent in clinical practice, but only a few studies in Saudi Arabia have addressed them. The current study was designed to review the lawsuits against healthcare professionals by analyzing records of the cases dealt with by the Medico-legal Committees (MLC) in various provinces in Saudi Arabia, in order to determine the pattern of medical errors and litigations in the country. **Materials and Methods:** A pre-designed data sheet was used to collect data from the records of the Medical Violation Committee (MVC) and the Medical Jurisprudence Committee (MJC). The data sheets consisted of information on details of the cases, details on where the error had occurred, and details of the errors. **Results:** The review of records revealed 642 cases, most of which were from hospitals run by the Ministry of Health (MOH). The operating room was where most of the errors (20.4%) had occurred, followed by the emergency room (18.1%). Surgery was at the top of the specialties (25.1%). Most of the deaths occurred in surgery and obstetrics (about 25% for each), followed by other medical specialties (17%). About half of the lawsuit cases studied (46.5%) involved patients belonging to a relatively young age group (20–50 years). **Conclusion:** Most of the medical error litigations involved surgeons and obstetricians especially in MOH hospitals. The process of litigations and documentation need to be improved, and access to the records for research and education need to be made easier. In addition, there is a need for more prospective field studies.

**Key words:** Litigations, medical errors, patient safety, Saudi Arabia

### INTRODUCTION

There is growing attention toward patient safety worldwide as the reduction of incidence and cost of adverse events (AE) has become a priority.<sup>[1-3]</sup> AE appear in medical literature under different names such as medical errors,<sup>[4]</sup> surgical errors,<sup>[2]</sup> or errors.<sup>[5]</sup>

There is more than one definition of error in the literature.<sup>[4,6,7]</sup> The Harvard Medical Practice study defines an adverse event as “an unintended injury that was caused by medical management and that resulted in measurable disability,” whereas negligence was defined “as failure to

meet the standard of care, reasonably expected of an average physician, qualified to take care of the patient in question.”<sup>[7]</sup>

AE and errors are frequent in clinical practice and they contribute to considerable morbidity and mortality.<sup>[8]</sup> In a Harvard Medical Practice study, AE occurred in 3.7% of hospitalizations, and permanent disabling injuries occurred in 2.6% of these patients.<sup>[9]</sup> Other studies have shown similar incidences. For example, a rate of 6.6 per 1000 admissions in France,<sup>[10]</sup> 2% of admissions in New Zealand,<sup>[11]</sup> and 0.4% in general practice in Australia.<sup>[5]</sup>

Occurrence of adverse drug events have also been reported. One study showed a rate of 6.5 adverse drug events per 100 admissions.<sup>[12]</sup>

Some specialties such as surgery are more prone to AE than others<sup>[13-16]</sup> as it is a dynamic specialty that is harder to control.<sup>[2,16]</sup> Also, patients would be less safe if their doctors were physically or psychologically fatigued, lacked knowledge,<sup>[17-19]</sup> and if there were system problems.<sup>[20]</sup>

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In order to reduce medical errors, some authors have recommended that a healthcare system should be designed to ensure patient safety possibly in the following three ways: (1) By designing the system to prevent errors; (2) designing procedures to make errors visible when they occur so that they may be rectified, and (3) by designing procedures for mitigating the adverse effects of errors when they are not detected and rectified.<sup>[20]</sup>

Mechanisms to reduce adverse drug events may include improvement of equipment and computers,<sup>[21]</sup> reducing reliance on memory, improving access to information, error proofing, standardization, training,<sup>[22]</sup> and a good system of reporting.<sup>[23]</sup>

Studies on medical errors in Saudi Arabia are scarce.<sup>[24-28]</sup> In 1996, Alhijaj reviewed the rules and regulation of medical practice in Saudi Arabia and discussed how malpractice committees work.<sup>[24]</sup> Alsiddique reviewed the records of Medico-legal Committees (MLC) in the Kingdom over a 4-year period (1420 (1999) through 1423 (2002)) and reported the trend of errors.<sup>[25]</sup> In a similar study, Al-Saeed reported the trend of medical liability claims over the period (1420 (1999) through 1424 (2003)) and reported similar findings in which the different provinces in the Kingdom were compared.<sup>[26,27]</sup> Both studies were based on cumulative records of the MLC and did not study individual cases. Though Samarkandi studied individual malpractice claims of the MLC, his study was restricted to anesthesia.<sup>[28]</sup>

The current study was designed to review lawsuits against healthcare professionals by analyzing records of each case with the MLC in various provinces in Saudi Arabia in order to determine the pattern of medical errors and litigations in the Kingdom.

### **The process of litigation**

To understand the process of litigations<sup>[29]</sup> against healthcare professionals in Saudi Arabia, it is important to understand the different committees through which litigations are actually processed.

### **Primary Investigation Committees**

These are formed by the administrative health authorities concerned (the Directorate General of Health Affairs, Directors of Health Services, and Deans of Medical Schools).

The committee is composed of three members: A physician, a legal expert, and another physician of the specialty in which the error occurred. The main responsibility of the committee is to interview both the plaintiff and the defendant and to scrutinize the medical records to find out

if there was an error. The committee then sends a written report and recommendations to the person authorizing the investigation, if there was an error. If the committee thinks that there was no error, they discuss their findings with the plaintiff. If he/she is not convinced, the case is then directed to higher committees.

### **Medical violation committee**

These committees are formed by the Minister of Health or other Ministers who have health services under their authority. The committees consist of three physicians and a legal expert. These committees are supposed to investigate any malpractice suits and violations of the regulations. They also have to verify medical errors and send all documents to the Medical Jurisprudence Committee (MJC) if any errors are found. The decisions of the MVC require the approval of the Minister concerned before implementation.

### **The Medical Jurisprudence Committee**

These were formerly known as MLC.

They are the highest committees that look at medical malpractice suits and are distinct from the MVC in their remit. The committee headed by a judge, includes three physicians (medical teaching staff from a medical school and two physicians from the Ministry of Health, MOH), as well as a legal expert. In the case of a malpractice suit against a pharmacist, the committee also has two pharmacists, one of whom is a member of the teaching staff of a pharmacy college and the other a pharmacist nominated by the Minister of Health. The committee is allowed to consult any expert in the field or specialty related to the case under scrutiny. The committee looks into all cases in which there is a claim for compensation (indemnity) because of death (blood money or *Diab*) or loss of an organ (indemnity). Blood money is the highest compensation paid only if death has occurred, whereas other categories of compensations are for the loss of an organ and/or its functions.

The committee looks at cases raised by the attorney general, even if no claim is made by the patient or his relatives.

The committee makes its decision on majority votes, provided that the judge is a part of this majority. The decision of this committee is independent, final, and can only be appealed through the Council of Governance within 60 days of its issue.

The MVC and the MJC are two distinct committees with different jurisdictions. However, in the case of death or loss of an organ or its functions, the MVC refers the case to the MJC. Also, the MJC can impose administrative punishments and general rights penalties.

## MATERIALS AND METHODS

At the time of the study, there were 15 MJC, one in each of the 12 regions of the Kingdom and three in Riyadh, the capital city. There were 12 MVC, one in each region in the Kingdom. A pre-designed, pre-coded, and tested data sheet was used by research assistants trained by the investigators to collect and record data from the records of the MVC and MJC. The data collectors were individuals working with the said committees, either as undersecretaries or coordinators. The data sheets consisted of information on demographic and clinical details of the case, who the plaintiffs and the defendants were, details of where the error had taken place, where the lawsuit was filed, and details of the error itself. Also included were, details of what happened to the lawsuit, whether the error was confirmed or not, and what the final penalty was if the error was confirmed.

All records of the MVCs covering 2 years [1427 and 1428H (2007–2008)] as well as those of the MJC in 1 year [1427H (2007)] were reviewed.

Data was entered into a personal computer using SPSS – win program for data analysis and simple statistics was used. Chi-square test was used for comparisons and correlation and *P* value of 0.05 or less was considered significant.

## RESULTS

The review of records over 1 year of MJC and over 2 years of MVC revealed 642 cases (275 cases from the former and 367 from the latter).

Most of the errors had occurred in the operating room (20.4%), followed by 18.1% in the emergency room, 12.9% in the general wards, 10.4% in the outpatient department, 9.2% in the delivery room, and 2.9% in the intensive care unit (ICU).

The distribution of the specialties in which errors had occurred was as follows: Surgery: 25.1%, obstetrics and gynecology: 22.3%, medicine: 12.5%, pediatrics: 7.8%, dentistry: 5.9, otorhinolaryngology: 3%, ophthalmology: 1.9%, and family medicine: 1.3% [Figure 1].

Most of the deaths had occurred in surgery and obstetrics (about 25% for each), followed by other medical specialties (17%) and pediatrics (11%). Also, there were more delays in cure in surgery and obstetrics (46.6% and 47.8%, respectively) than others.

Table 1 shows that 29.2% of the plaintiffs had asked for administrative punishment, 23.1% for general rights,

15.5% for both general and personal rights, 12.2% for compensation, and 11.6% for blood money (*Diab*).

Close relatives or guardians (next of kin) of the patients had initiated most of the complaints (43.8%), followed by the patient (13.4%), and other relatives (12.8%).

Half of the complaints made for blood money were filed by the next of kin, followed by relatives (31.6%). Similarly, demand for compensations were made mainly by the next of kin (37.5%), the patient himself (30%), and a relative (20%).

Demand for administrative punishment represented about one-third of the complaints (29.2%) and were made mainly by the next of kin (42.7%), followed by patients (14.5%), and the healthcare institution (9.4%).

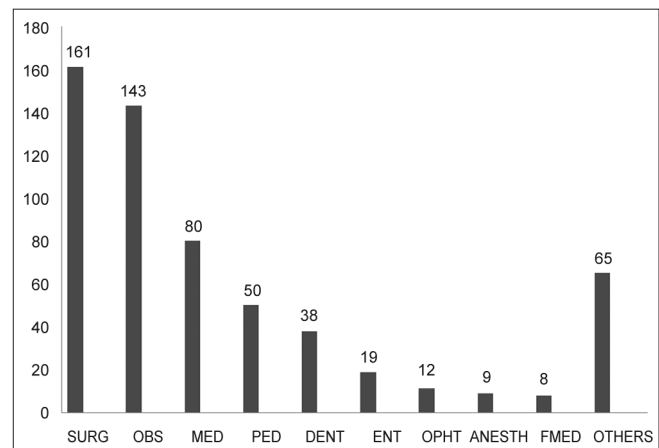
Petitions for general rights accounted for 23.1% of the complaints and were made mainly by the attorney general (30.3%), followed by the next of kin (28.9%).

A comparison between government sectors and the private sector revealed significantly more complaints made for compensation in the private sector (Chi square = 25.52, *P* < 0.001).

In the majority of the complaints (47%), no error could be identified. Error with harm was found in 34.5%, and, in 18.5%, there were errors with no identifiable harm [Table 2].

In 28% of the cases, death had occurred, although no error was found in 34.1% of these cases. In about 30% of the cases, permanent disability had occurred, out of which 22.2% had no identifiable error [Table 2].

More than 50% of the complaints were made at the General Directorate of Health. Of these, 42% had no errors.



**Figure 1:** The distribution of specialties, in which errors occurred the most

This was followed by the MOH, which had 25% of the cases, out of which two-thirds (66.2%) had no identifiable errors [Table 3].

Few complaints were filed at the Royal Cabinet (4%). In the majority of these (56%), no error was identified and very few complaints were lodged in the office of

the Deputy Minister of Health (0.8%). Further analysis of data in Table 3 showed that more of the complaints lodged at the Royal Cabinet office had revealed harm compared with complaints made at other places ( $\chi^2 = 9.93$ ,  $P = 0.042$ ). Also, demand for compensation was the basis of more of the complaints by the patient himself or relatives ( $\chi^2 = 21.56$ ,  $P = 0.0002$ ).

**Table 1: Reasons for complaint vs. who placed the complaint (for cases where an error was found)**

Who placed the complaint	Blood money		Compensation		Administrative punishment		General rights		General and personal rights		More than one reason		Other		Total	
	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%
The patient	4	10.5	12	30	14	14.5	3	4.0	8	18.2	2	8.7	1	20	44	13.4
Next of kin	19	50.0	15	37.5	47	42.7	22	28.9	31	60.8	14	60.9	2	40	144	43.8
A relative	12	31.6	8	20	4	4.2	5	6.6	10	19.6	3	13.0	0	0	42	12.8
Sponsor	0	0	0	0	2	2.1	0	0	0	0	0	0	0	0	2	0.6
Attorney general	0	0	0	0	3	3.1	23	30.3	1	2.0	0	0	0	0	27	8.2
The health care institution	1	2.6	1	2.5	9	9.4	8	10.5	1	2.0	1	4.3	0	0	21	6.4
More than one	0	0	1	2.5	0	0	6	7.9	0	0	2	8.7	0	0	9	2.7
Others	2	5.3	3	7.5	23	24	9	11.8	0	0	1	4.3	2	40	40	12.2
Total	38	11.6	40	12.2	96	29.2	76	23.1	51	15.5	23	7.0	5	1.5	329	100

**Table 2: Relationship between the results of investigation and the actual harm that occurred**

Type of harm	Result of investigation			Total no. (%)
	No error no. (%)	Error but no harm no. (%)	Error and harm no. (%)	
Death	60 (34.1)	10 (5.7)	106 (60.2)	176 (27.9)
Loss of an organ	8 (34.8)	2 (8.7)	13 (56.5)	23 (3.7)
Loss of function	6 (31.6)	0 (0)	13 (68.4)	19 (3.0)
Permanent disability	4 (22.2)	0 (0)	14 (77.8)	18 (29.5)
Temporary disability	15 (55.6)	9 (33.3)	3 (11.1)	27 (4.3)
Bleeding	2 (66.7)	0 (0)	1 (33.3)	3 (0.5)
Severe pain	16 (42.1)	11 (28.9)	11 (28.9)	38 (6.0)
Delay of cure	23 (38.3)	15 (25)	22 (36.7)	60 (9.5)
Other harms	26 (46.4)	23 (41.1)	7 (12.5)	56 (8.9)
Multiple harms	8 (30.8)	5 (19.2)	13 (50)	26 (4.1)
Undefined	128 (69.2)	42 (22.7)	15 (8.1)	185 (29.3)
Total	296 (47.0)	117 (18.5)	218 (34.5)	631 (100)

**Table 3: Results of investigation vs. where the complaint was placed**

Where was the complaint placed?	Result of investigation			Total no. (%)
	No error no. (%)	Error but no harm no. (%)	Error and harm no. (%)	
Royal cabinet	14 (56)	1 (4)	10 (40)	25 (4.0)
Minister of Health	102 (66.2)	17 (11.0)	35 (22.7)	154 (24.4)
Deputy Minister of health	4 (80)	0 (0)	1 (20)	5 (0.8)
Director general of health affairs	140 (42.2)	79 (23.8)	113 (34.0)	332 (52.6)
Hospital director	13 (31.0)	7 (16.7)	22 (52.4)	42 (6.7)
More than one	2 (7.7)	5 (19.2)	19 (73.1)	26 (4.1)
Others	18 (43.9)	7 (17.1)	16 (39.0)	41 (6.5)
Not defined	3 (50)	1 (16.7)	2 (33.3)	6 (1.7)
Total	296 (46.9)	117 (18.5)	218 (34.6)	631 (100)

Table 4 shows that both error and harm were discovered in about 35% of the cases. In these cases, there were demands for blood money. This was followed by, compensation (60%), monetary fines (59.5%), and, in 74%, more than one punishment was meted out to the offender [Table 5].

Table 5 shows that 39 out of 156 (25%) of the lawsuits that were filed at the office of the Minister of Health and 83 out of 338 (24.5%) of those filed at the Director General of Health Affairs were made because death had occurred. The corresponding rate for lawsuits filed at the offices of the Hospital Directors was 20 out of 42 (47.6%) and more than half of those were at the Royal Cabinet (53.8%).

## DISCUSSION

The problem of medical errors was not easy to investigate for several reasons. First, access to the records of the

various committees was difficult and was only possible on the order of his Excellency the Ex-Minister of Health. Second, this is a highly sensitive area for the professionals and healthcare managers. Third, the response rate from some regions included in the study was very low. The possible reasons for these reservations are the ever increasing media focus interest on medical errors and the prevailing blame culture, which certainly makes people hesitant to discuss them. It was difficult, therefore, for the investigators to estimate the size of the problem. It was only possible to collect data by reviewing available records. The discrepancy in the total number of cases registered yearly between our study and other studies,<sup>[28]</sup> can only be explained by the lack of accurate documentation. In addition, one of the regions did not submit any documentation of their cases.

The process of litigation against healthcare professionals in Saudi Arabia is unique. While it is easy for patients and or patient's relatives to file their complaint at any

**Table 4: Type of punishment (judgment) vs. the result of investigation**

Type of sentence (judgment)	Result of investigation			Total no. (%)
	No error no. (%)	Error but no harm no. (%)	Error and harm no. (%)	
Blood money ( <i>Diah</i> )	0 (0)	0 (0)	10 (100)	10 (1.6)
Compensation	3 (30)	1 (10)	6 (60)	10 (1.6)
Fine (monterial)	7 (0.5)	55 (36.0)	91 (59.5)	153 (24.2)
Fine (administrative)	2 (66.7)	1 (33.3)	0 (0)	3 (0.5)
Invalidation of license	0 (0)	2 (66.7)	1 (33.3)	3 (0.5)
Warning	8 (15.1)	31 (58.5)	18 (34.0)	57 (8.4)
More than one sentence	1 (1.4)	18 (24.3)	55 (74.3)	74 (11.7)
Not defined*	110 (76.3)	5 (3.5)	29 (20.1)	144 (22.8)
No conviction	165 (91.5)	4 (2.3)	8 (4.5)	177 (28.1)
Total	296 (47.0)	117 (18.5)	218 (34.5)	631 (100)

\*Either the complaint was withdrawn or the case is not yet resolved

**Table 5: Type of harm vs. where the complaint was placed**

Where was the complaint placed?	Type of harm										Total
	Death	Loss	Loss	Permanent disability 1	Temporary disability 2	Severe bleeding	Severe pain	Delay of cure	More than	Others	
The Royal Cabinet	14	2	0	1	2	0	0	1	0	6	26 (4.1)
Minister of Health	39	5	8	1	4	1	15	19	3	61	156 (24.3)
Vice Minister of Health	1	0	0	0	0	0	0	1	0	3	5 (0.8)
Director General of Health Affair	83	11	3	8	18	3	19	28	16	149	338 (52.7)
More than one	10	2	3	1	0	0	1	2	5	2	26 (4.1)
Not defined	2	0	0	0	0	0	0	0	1	3	6 (0.9)
Hospital director	20	3	3	1	2	0	1	5	0	7	42 (6.6)
Others	9	0	3	6	1	0	3	4	1	15	42 (6.6)
Total	178 (27.8)	23 (3.5)	19 (3.1)	18 (2.8)	27 (4.2)	4 (0.6)	39 (6.1)	60 (9.4)	26 (4.1)	246 (38.3)	641 (100)



administrative level in the health care hierarchy, resolution may take several months and sometimes years, especially if there is a request for compensation.

This bureaucratic system affects not only the patients and patient's relatives, but also the healthcare professional, for whom the long wait for a verdict can be most agonizing. An increase in number of the committees may hasten the litigation process.

Lack of good documentation was an obvious problem in all MLC. The exception was, the MJV in Jeddah, which has started computerization of all documents. Extending this process to the other committees will probably improve the collection of information.

It is clear that one of the main reasons for complaints related to administrative action, indicating that patients and relatives were dissatisfied with the quality of care provided to them. Their main reason for filing these cases was to have the healthcare professional warned for the misconduct or error. A possible reason for their discontent could be the lack of proper communication. Improving the communication process may minimize misunderstanding and discontent. Patients and their relatives have the right to know all details of the disease, the intervention, and the possible complications of both.

One-fifth of the reasons for filing the complaints was to demand compensations. The rules and regulations for healthcare practice in Saudi Arabia give the patients and their relatives the right to compensation for the loss of an organ and/or its function. The MJC is a Judicial Committee responsible for determining the amount of compensation to be paid based on Islamic Shariah Law. The fact that more suits were filed against the private sector for compensations may reflect the lack of satisfaction with healthcare paid for by patients or relatives. This makes the private sector very vulnerable.

In about half of the litigations, no errors were found by either the MCV and or the MJC. This may indicate that the local media has made the public overly sensitive to medical errors. This situation tends to lead to a misunderstanding and misinterpretation of the medical and surgical complications as medical errors. More collaborative work between healthcare professionals and healthcare authorities and the media is required to help improve journalists' knowledge, promote an understanding, and resolve the differences in attitudes in order to regenerate confidence in healthcare professionals in the Kingdom. However, the 50% rate of errors found in the cases investigated demands that all possible means should be used to address the issue.

More lawsuits were filed for permanent disability than any others. Next was the death of the patient. A patient's death is tragic, especially if it was unexpected or unforeseen as a possible outcome of the medical or surgical intervention, thus triggering a complaint of a medical error. Similarly, living with a permanent disability as a result of a medical intervention is tragic and difficult to accept and naturally impels the patient and or the family to complain.

The main two specialties that were most liable to litigation in this study were surgery including various sub-specialties (25%) and obstetrics and gynecology (22%), and they also contributed to more deaths and delays in cure. This may have resulted from the high rate of interventional procedures and the need for prompt and immediate decision and actions in these specialties. Consequently, surgeons or obstetricians are put under a great deal of pressure and stress. This is a finding in accord with the results of previous studies in the Kingdom,<sup>[27,28]</sup> and elsewhere.<sup>[9,10]</sup> These specialties' are high-risk, demanding good decision making, team work, appropriate communication, and technical skills. Any shortcomings in any of these competencies may result in adverse consequences and errors. What is urgently required is an improvement of the organizational structure and systems to help minimize errors in these specialties. System failure contributed 86% of the incidents in surgery according to another study.<sup>[16]</sup> Some other factors were inexperience, lack of competence, communication breakdown, and excessive workload.

It is noteworthy that more than half of the errors reported were from the MOH Hospitals. This finding may not reflect the true picture since the exact figures for all the clinical activities and procedures in these hospitals were not available. The MOH provides healthcare to about 70% of the population in Saudi Arabia. Unfortunately, some of these hospitals, especially in remote areas, are more prone to errors because of the lack of technical facilities and appropriate training and surgical expertise. This can only be remedied with a better understanding of errors, how they occur, and the appropriate interventions to prevent them. Some authors have advocated a system of training that includes monitoring and counseling, surgical courses, and simulations on animal tissue and cadaveric tissue to improve surgical skills<sup>[19]</sup> and prevent errors. The new regulation in the Kingdom regarding standardization and accreditation of hospitals by a central body could perhaps improve the situation and help hospitals and healthcare authorities' to contend with the rising rate of medical errors.

Patient's relatives, especially the next of kin, initiate most of the complaints. This is not surprising since the Saudi

community is family oriented, the family's contribution to patient's care is enormous, and the interest generated by the result of healthcare is equally great. Moreover, there is the added weight of the responsibility on the shoulders of the patient's guardian or next of kin.

The Director Generals of Health Affairs in the different regions receive most of the complaints. This is because they are more accessible to the patients and their relatives. The Minister of Health plays a major role here by bearing the responsibility of processing the complaint.

What is surprising is that the Deputy Minister of Health received the least number of complaints. It is possible that most of the public are unaware that complaints may be lodged at this level.

It seems that the public should be made aware that complaints may be filed at this level, rather than at the higher levels. This study found that about two-thirds of the complaints filed at the office of the Minister of Health, and more than half of those lodged at the Royal Cabinets revealed no errors. To save the time of the high official, we believe that complaints should be filed at a lower level in the hierarchy, unless it is absolutely necessary.

Doctors involved in medical errors, in which blood money or compensation was demanded, have to pay from their own resources, which places a great burden on them. Recently, the Saudi government made it compulsory that all doctors should be insured against medical errors, even if they are not practicing. This hopefully will ease the burden on doctors and other healthcare professionals.

In conclusion, this study explored the pattern of medical errors and litigations in Saudi Arabia based on the records of the MLG. Surgeons and obstetricians, especially in MOH hospitals, were involved in most of the medical errors and litigations.

The process of litigations and documentation need to be improved and access to the records for research and education should be made easier. It is hoped that this study would stimulate other prospective studies on the prevalence of medical errors in Saudi Arabia—the reasons behind discontent and the rising rate of litigations.

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