

To Report or not: The Dilemma of Reporting Medical Errors among Physicians

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Abstract

Objectives: Medical errors (ME) can be an important cause in hindering the improvement in the quality of service provided to patients as well as their wellbeing. Underreporting ME by health professionals might prevent identifying the areas that require attention. This in turn, will not only affect the quality of service provided to patients, but also it might increase the rate of litigation and patient harm. **Methods and Materials:** In a questionnaire on reporting medical errors (RME), we evaluated demographics of physicians, their knowledge on RME and attitude towards reporting and practice of reporting and/or concealing their errors. **Results:** Reporting was significantly higher among consultants, ($P=0.001$). Furthermore, 48% ($n=81$) confessed committing ME, of which 35% ($n=59$) had reported it. The majority of participants 81% ($n=137$) consider reporting ME an ethical issue. **Conclusion:** There is an agreement amongst physicians that reporting ME is an ethical issue. Reinforcement of RME and reducing ME can be achieved by implementing strict guidelines, training personnel efficiently and using the experience of professionals in their appropriate fields.

Keywords: Medical errors; Reporting medical error; Physician attitude

Introduction

In the medical field, just as in any practice, the occurrence of errors, mistakes and inaccuracies is inevitable. However many authorities have been attempting to investigate methods of reducing and possibly eliminating human errors and their potential hazardous squeals (1,2). Over the years, manual work has been replaced by computerized digital systems

in the hope of reducing human work-related errors which is extremely crucial particularly in hospitals. When it comes to a patient's life and well-being, mistakes may be unforgivable (3). Medical error can result in tremendous damage and unwanted consequences; not only the patient's health can be in turmoil but also the treating physician can be greatly affected (4,5). When any member of the health care system

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makes a mistake, it may well jeopardize his/her mental status, emotions, and performance. Thus, it is imperative to find appropriate ways to help solve this problem (6). In our belief, one of the major aspects of reducing errors is to report these errors to the authorities in charge in the respective institutes. Actions, in terms of education, training, advice, system modifications, and possibly penalties, should be implemented following reporting. Physicians should also have a positive attitude towards this, and not shy away from their responsibility of reporting. Every member in a hospital should be encouraged to report and hence eliminate all possible errors so that patients can receive the best possible care from all providers.

Our study aimed to investigate the attitude of physicians in our hospital towards reporting their ME, and to evaluate their knowledge on reporting. Furthermore, we aimed at finding the aspects behind their practice of reporting and/or concealing their errors. We also focused on investigating the possible appropriate actions to be taken following reporting of errors in the hope of reducing their re-occurrence.

Materials and Methods

Study design

Our study was a cross-sectional descriptive study conducted in King Abdulaziz University Hospital, Jeddah, Saudi Arabia, over the period of 6 months – November 2011 to April 2012.

The study team developed a questionnaire that was designed to measure knowledge and evaluate the attitude and practice of physicians on reporting medical errors. The questionnaire constituted of 4 sections evaluating demographics of the interviewees, the knowledge on reporting errors, the physicians' attitude towards reporting, and the practice of reporting and concealing their errors. The questionnaires were then subjected to further evaluation in a pilot study to enhance its face

validity. Our pilot study was conducted on 12 residents, and thus final modifications and amendments were performed prior to commencing the actual study.

A total of 250 questionnaires were printed and distributed to all physicians (Consultants, Specialists, and Residents) attending King Abdulaziz University Hospital. The study team received only 169 filled questionnaire forms back out of the 250 for analysis. The calculated return rate was found to be 67.6%.

In order to ensure the quality of the data that were to be retrieved from the questionnaires, we sub-divided our study team into 3 divisions. Division 1 was assigned to review the answered questionnaires to confirm that all questions were answered. Division 2 was assigned to review the data before entering it into the software program for analysis. Division 3 was assigned to review a random sample of the questionnaires to detect pitfalls.

Statistical analysis

Statistical package of social science (SPSS) version 18 was used for statistical analysis. The qualitative data were presented in the form of number and percentage. Chi-square test was used as a test of significance for qualitative data; Yates correction was used when the expected cell was less than 5. The quantitative data were expressed as means with standard deviations.

Results

We had a total of 169 participants in the study; of which 43.2% (n=73) were consultants, 34.3% (n=58) were residents and 22.5% (n=38) were specialists (22.5%). Our study population had a mean (SD) age of 39.24 (11) years, and ranged between 25 and 65 years. 67.5% of the



Variable	Specialist n=38 (22.5%)		Consultant n=73 (43.2%)		Resident n=58 (34.3%)		P- Value	Total n=169	
	n	%	n	%	n	%		n	%
Age	43.5 (8.09)		46.2 (8.77)		27.6 (2.57)			39.24 (11)	
Gender							0.611		
Male	28	73.7	47	64.4	39	67.2		114	67.5
Female	10	26.3	26	33.6	19	32.8		55	32.5
Nationality							0.001		
Saudi	13	34.2	60	82.2	55	94.8*		128	75.7
Other	25	65.8*	13	17.8	3	5.2		41	24.3
Primary Work area							0.001		
Anesthesiology	2	5.3	6	8.2*	2	3.4		10	5.9
Emergency medicine	14	36.8*	2	2.7	5	8.6		21	12.4
Clinical Laboratory	4	10.5*	0	0	1	1.7		5	3
Medicine	3	7.9	14	19.2*	7	12.1		24	14.2
Obstetrics & Gynecology	2	5.3	14	19.2*	9	15.5		25	14.8
Pediatrics	2	5.3	9	12.3	9	15.8*		20	11.8
Surgery	9	23.7	20	27.4	21	36.2*		50	29.6
Radiology	2	5.3	8	11*	4	6.9		14	8.3
Duration of work at KAUH	8.55	5.98	16.89	7.03	2.68	1.97			169
Country of UGE							0.001		
Saudi Arabia	13	34.2	56	76.7	52	89.7*		121	71.6
Other	25	65.8*	17	23.3	6	10.3		48	28.4
Country of PGE							0.001		
Saudi Arabia	10	26.3	11	15.1	54	93.1*		75	44.4
Middle East	25	65.8*	2	2.7	3	5.2		30	17.8
Other	3	7.9	60	82.2*	1	1.7		64	37.9

Table 1: Demographic Characteristics of Participants

*Statistically significant, KAUH=King Abdulaziz University Hospital PGE= Post graduate education UGE= Undergraduate education.

participants were males, and 32.5% were females. More than 80% of the consultants and Results obtained from the section studying the practice of physicians in the questionnaire (Table 2) show that 87% (n=147) of our study sample claim that they have seen ME throughout their careers, and appears to be highest among consultants 94.5% (n=69). Only 56% (n=95) of our study sample claimed that they had reported the errors they had seen. Reporting of errors was also significantly higher among consultants 79.7% (n=55) compared to specialists and residents (P= 0.001). Furthermore, 48% (n=81) of the participants

confessed that they had made ME themselves which was statistically insignificant, and only 35% (n=59) had reported their own mistakes to authorities in charge. Although insignificantly, consultants had the highest rate of self-reporting 81.1% (n=30) . Unfortunately, only 17.2% (n=29) had their own ME investigated, and a significantly higher rate seen was amongst consultants 26% (n=19) (P= 0.015). 24.9% (n=42) of the participants reported that they had been investigated for their colleagues ME; this was of a higher rate in specialists 31.6% (n=12).

Variable	Specialist n=38		Consultant n=73		Resident n=58		P- Value	Total n=169	
	n	%	n	%	n	%		n	%
Have you ever seen ME?	30	78.9	69	94.5*	48	82.8	0.034*	147	87
Did you report it?	22	73.3	55	79.7*	18	37.5	0.001*	95	56
Have you ever made ME?	18	47.4	37	50.7	26	44.8	0.798	81	48
Did you report it?	14	77.8	30	81.1	15	57.7	0.105	59	35
Have you ever been investigated for your own ME?	6	15.8	19	26*	4	6.9	0.015*	29	17.2
Have you ever been investigated for your colleague's ME?	12	31.6	18	24.7	12	20.7	0.482	42	24.9

Table 2: Practice of the Participant Group in Regard to Reporting Accidents

*Statistically significant

The level of physicians' knowledge on the subject of ME and their attitude towards reporting errors was assessed using 2 categories/formats of questions – level of agreement and level of disagreement.

The majority of participants 81% (n=137) believe/consider that reporting ME is an ethical issue with the highest level of agreement found in the consultants group 100% (n=59). Also, 60.4% (n=102) agreed that reporting ME helps alleviate the feelings of guilt associated with committing the error and its subsequent effects. This was significantly highest among the consultants' group 78% (n=46).

Regarding the effect of RME, 36.1% (n=61) thought it would decrease the rate of ME while a higher rate was observed in specialists 56.2% (n=18). 82.8% (n=140) thought RME would prevent future complications with higher rate in specialist 100% (n=32).

As regards to confidentiality of reported ME, 63.9% (n=108) thought that ME should be kept confidential. Specialists were the most 81.2% (n=26) who felt that errors are best to be kept concealed. Furthermore, specialists [93.8% (n=30)] were the most who believed that ME should be discussed and solved within their respective departments and not disclosed to hospital administration (Table 3). As can be

seen in Table 4, only 7.1 % (n=12) of the participant thought it was not their responsibility to RME with highest rate in specialists 66.7% (n=4), and 6.5% (n=11) of them thought it might ruin their relationship with their colleagues with highest rate in

specialists 66.7% (n=4). 2.4 % (n=4) reported that they might RME with highest rate in residents 40% (n=2), and 5.9% thought confidentiality is not an issue with highest rate in consultants 42.9 % (n=6).

Variable	Specialist n=32		Consultant n=59		Resident n=53		P- Value	Total	
	n	%	n	%	n	%		n	%
Reporting is an ethical issue.	30	93.8	59	100	48	90.6	.182	137	81
Reporting helps alleviate feelings of guilt.	18	56.2	46	78.0*	38	71.7	.005*	102	60.4
Punishment will be less if ME is reported.	18	56.2*	28	47.5	15	28.3	.001*	61	36.1
Reporting prevents future complications.	32	100.	59	100.	49	92.5	.133	140	82.8
ME should be kept confidential.	26	81.2*	45	76.3	37	69.8	.026*	108	63.9
The problem should be solved within the department.	30	93.8	55	93.2	44	83.0	.177	129	76.3

Table 3: Percentage of agreement toward some issue related to reporting ME among the study groups

*Statistically significant

occurrence of ME. In the questionnaires we had 6 suggested solutions. A significant number of the participants 69.2% protection of a physician's reputation is one of the main reasons behind under-reporting of ME. Specialists 78.9% (n=30) were the most to give that response. Escaping penalty (avoiding punishment) 69.2% (n=117) was the second most chosen answer by the participants as a reason behind concealment of ME. On the other hand, 47.9% (n=81) thought that physicians have no incentives to disclose errors and 40.2% (n=68) thought that one would not report their own ME simply because the error would not be discovered. A total of 160

participants (94.7%) believed that it was imperative for our hospital to develop a suitable system to reduce the thought that

employing more nurses to the hospital would help to reduce the occurrence of ME, this was mostly agreed upon by consultants. Also, 94.1% (n=159) think that the training programs for employees need enhancement; specialists were the most who approved. Moreover, 79.9% (n=135), mainly consultants, believed that the use of experienced and well-trained physicians specifically in the ICU would reduce the incidence of errors. Additionally, 82.8% (n=140), with the majority being residents, agreed upon reducing working hours to reduce medical errors. The suggestion of adding pharmacists to the hospital's team rounds was appreciated by 86.4% (n=146) of the



participants, mainly consultants. Only 34.9% (n=59) thought that suspending a physician's license is a reasonable solution for preventing ME (Table 6).

Variable	Specialist n=6		Consultant n=14		Resident n=5		P- Value	Total	
	n	%	n	%	n	%		n	%
It is not my responsibility.	4	66.7*	8	57	0	.0	.023*	12	7.1
I do not want to lose my good relationship with my colleague.	4	66.7	4	28.6	3	60	.202	11	6.5
I might be reported by my colleague in turn.	2	33.3	0	.0	2	40	.152	4	2.4
Confidentiality is an issue	2	33.3	6	42.9	2	40	.111	10	5.9

Table 4: Percentage of disagreement toward some issue relater to reporting ME among the study

*Statistically significant

Variable	Specialist n=38		Consultant n=73		Resident n=58		P- Value	Total	
	n	%	n	%	n	%		n	%
No incentives to error disclosure.	22	57.9	32	43.8	27	46.6	.443	81	47.9
Avoiding punishment.	30	78.9	43	58.9	44	75.9	.078	117	69.2
Avoiding damage to reputation.	30	78.9	53	72.6	42	72.4	.181	125	74
It will not be discovered.	18	47.4	25	34.2	25	43.1	.436	68	40.2

Table 5: The percentage of agreement toward causes of concealing errors

*Statistically significant

Discussion

ME are varied. The result is eventually the harm to patients. ME include errors in diagnosis, administration of drugs and surgical procedures amongst others. ME should be differentiated from malpractice in that the former is regarded as honest mistakes or accidents.

Generally, administration of inappropriate method of patient care that is opposed to standardized method of care, or failure of performing appropriate method by health care provider leads to ME. ME are usually described as human errors in healthcare e.g. (7,8). inaccurate or incomplete diagnosis or

management of a disease. A recent report "To Err Is Human" released by the Institute of Medicine (IOM) drew attention on the burden of medical errors. They concluded that among the American population, there are more deaths related to ME in hospitals than there are deaths related to injuries in vehicle accidents. Since the release of that report, numerous new efforts have been initiated to help reduce the incidence of ME (9). Furthermore, a recent study conducted on 184 residents found that being involved in a medical error was associated with a significant decrease in quality of life and increased rates of depression (10,11,12).



Variable	Specialist n=38		Consultant n=73		Resident n=58		P- Value	Total	
	n	%	n	%	n	%		n	%
Develop systems for preventing ME.	38	100.0	69	94.5	53	91.4	.196	160	94.7
Increase the number of nurses.	26	68.4	57	78.1*	34	58.6	.005*	117	69.2
Provide better training for workers.	36	94.7	69	94.5	54	93.1	.241	159	94.1
Use only well-trained physicians in the ICUs.	26	68.4	64	87.7*	45	77.6	.006*	135	79.9
Reduce working hours of physicians.	30	78.9	59	80.8	51	87.9	.513	140	82.8
Include a pharmacist on hospital rounds.	30	78.9	68	93.2*	48	82.8	.011*	146	86.4
Suspend the licenses for Physicians who make MEs.	14	36.8	26	35.6	19	32.8	.288	59	34.9

Table 6: Percentage of agreement toward actions that should be taken to prevent ME

*Statistically significant

Lawsuits related to ME are noticed to be increasing lately. It was reported that they are higher in obstetric practice (27%), followed by general surgery (17%) and other subspecialties (13, 14). Alsafi et al. evaluated the aspects behind physicians' attitudes toward medical error disclosure. They concluded that physicians are likely to disclose errors made by a colleague only if the error resulted in severe harm to the patient, and as such, ME go underreported for a variety of reasons. Their

study was conducted among a single hospital in the kingdom of Saudi Arabia (15); therefore we felt the need to conduct a similar study in the hope of finding a solution to the problem in our country, and to see if results were reproducible. In our study, 87% of our participants had witnessed a medical error but only 56% of them reported those errors. This proves that errors are common but underreported. The reasons behind this needed to be investigated. Although most physicians



believe that reporting is their responsibility (92.9%), they may still be refraining from doing it. Our results suggest that a physician's reputation (74%) and the fear of punishment (69.4%) may contribute to the problem. Our results were similar to those obtained in the above mentioned studies (10,13). Furthermore, our results significantly suggest that physicians feel that the employment of more nurses, highly qualified intensivists and clinical pharmacists to our institute can help reduce the occurrence of errors.

Limitations: Following the completion of our study, we realized that other factors must be taken into consideration. We believe that further classification of residents to juniors and seniors was needed. Since junior staff are still in training, their errors may well be higher and the fear of punishment may also prevent them from reporting. We also feel that the studies should have been conducted among nursing staff to investigate their perspectives. Additionally, we feel that the translation of the questionnaire to the staff's mother-tongue language may have helped the participants better answer the questions.

Most research papers have failed to clarify the scope of the problem because of several limitations. There are no studies that have examined the subject of ME from the perspective of different levels of physicians; only residents were included in previous studies. Also, sample sizes were small or personal narratives of individual physicians experiences following errors (16). Alsafi et al.

carried out a study in Saudi Arabia and found that physicians are likely to disclose errors made by a colleague only if patients are severely harmed, and as such, medical errors go under-reported. Assurance of confidentiality and protection from backlash would promote medical error disclosure.¹⁵

Conclusion:

There is an agreement amongst physicians that reporting ME is an ethical issue. This however is not reflected in their practice. ME are under-reported due to fear of indented reputation and suffering a penalty. Reinforcement of RME and reducing ME can be achieved by implementing strict guidelines, training personnel efficiently and using the experience of professionals in their appropriate fields. Health care institutions should adopt programs that help encourage medical professionals in reporting ME avoiding in the process the creation of a blame culture. We also recommend conducting further studies on the rates of errors and their reporting pre- and post- implementation of the above mentioned solutions.

Disclosure of benefit

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Conflicts of interest

The authors declare that they have no conflict of interest.

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