Original Article

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Evaluation of the Malpractice of General Surgeons in Complaints Referred to the Forensic Medicine Department of Tehran Center from 2016 to 2022

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Abstract

Background: Medical malpractice represents a growing concern in healthcare systems globally, with significant ethical, legal, and professional implications. General surgeons are among the most frequently implicated specialists in malpractice complaints reviewed by Iran's Forensic Medicine Organization (FMO). Despite this, comprehensive analyses of complaints specifically involving general surgeons in Tehran remain limited. This study aimed to evaluate the characteristics, underlying causes, and outcomes of malpractice complaints against general surgeons referred to the Forensic Medicine Commission of Tehran from 2016 to 2022.

Methods: In this descriptive cross-sectional study, all the malpractice cases related to general surgery submitted to the legal medical commissions of Tehran from 2016 to 2022 were reviewed. Data were extracted from the validated case files, including plaintiff demographics, characteristics of the complaints, and details of the malpractice findings. Cases with incomplete data were excluded from the analysis.

Results: Of 965 total malpractice complaint cases, 196 (20.31%) involved general surgeons. Among these, 77 cases (39.28%) resulted in a confirmed malpractice verdict. The majority of cases originated from private medical centers (54.59%), which also had the highest malpractice rate (52.34%), followed by charity hospitals (36.36%) and university hospitals (20.93%). Mortality was reported in 9.10% of the confirmed malpractice cases, while the remaining cases involved organ failure or long-term functional impairment.

Conclusion: Nearly 40% of the reviewed claims resulted in confirmed malpractice, with private centers presenting the highest conviction rate. The predominance of emergency surgeries, technical incompetence, and carelessness as leading causes of malpractice underscores the need for improvements in surgical education, clinical oversight, and procedural standards.

Keywords: Forensic medicine, General surgery, Physical impairment, Malpractice

Introduction

Medical malpractice is a growing concern in health systems worldwide, posing significant ethical, legal, and professional challenges (1). Physicians, particularly those in high-risk specialties, face increasing scrutiny due to the complexity of medical care and rising patient expectations. Surgical disciplines, especially general surgery, are often the focus of malpractice allegations due to the invasive nature of procedures, the urgent conditions they address, and the severity of potential complications (1). In Iran, Forensic Medicine Organization (FMO) plays a central role in adjudicating medical disputes, reviewing complaints, and determining liability (2). Understanding the patterns of malpractice complaints, particularly those referred to the FMO, is essential for developing preventive strategies and ensuring patient safety (3).

Studies have indicated that obstetrics and gynecology, orthopedics, and general surgery are the fields with the most complaints (4). Studies in Iran are similar to this trend as recent studies show that complaints have risen significantly in the past two decades, with specialties such as general surgery, obstetrics and gynecology, and orthopedics frequently implicated (5).

Additionally, a notable increase in malpractice claims has been observed in Iran. According to the report of FMO, the amount of medical malpractice complaints has increased from 184 cases in March 1995 to 289 complaints in March 1999 (6).

General surgeons have been identified as one of the most frequently implicated specialties in malpractice complaints reviewed by FMO (7). Internationally, general surgery has also been a high-risk field for litigation, with common causes of claims including surgical complications, misdiagnosis, and postoperative care deficiencies (1). Raeissi *et al* and Vaziri *et al* identified negligence, lack of skill, and failure to adhere to clinical protocols as the leading causes of malpractice in Iran (5,7). These findings are echoed in regional studies, who reported similar patterns (8). Additionally, systemic issues such as inadequate reporting mechanisms and poor interprofessional communication have been recognized as contributing factors (9).

Given the legal framework in Iran, physician accountability is clearly defined in the Islamic Penal Code. Articles 495 (10) and 295 (11) emphasize the physician's duty to adhere to professional standards, with liability assigned in cases involving negligence, incompetence, or failure to perform legal obligations. The concept of fault includes carelessness, imprudence, non-observance of regulations, and deviation from established medical guidelines. Article 145 of the same code defines fault to include negligence, lack of skill, and failure to observe government regulations (11). Furthermore, Article 295 holds physicians legally responsible if harm results from omission of duty when the physician was capable of fulfilling it (11). These provisions serve as the legal foundation for forensic review of malpractice claims in Iran.

Despite the critical role of the Legal Medicine Organization (LMO) in malpractice adjudication, comprehensive evaluations of general surgery complaints in Tehran remain limited. Most prior studies have focused on national trends or single institutions without offering specialty-specific insights (12). Therefore, a focused investigation of malpractice claims in general surgery, as adjudicated by Tehran's FMO, is both timely and necessary.

This study aims to evaluate the characteristics, causes, and outcomes of malpractice complaints involving general surgeons referred to the Forensic Medicine Commission of Tehran from 2016 to 2022.

Materials and Methods

Study design and setting

This was a descriptive cross-sectional study conducted to evaluate cases of medical malpractice involving general surgeons, referred to the LMO commissions of Tehran Province, Iran, from March 2016 to March 2022. The study was conducted using archival data from the Legal Medical Commissions Office. The reporting of the study adheres to the Strengthening the Reporting of Observational Studies (STROBE) statement.

Participants and inclusion criteria

The study included all the patient complaint files submitted to the Tehran Legal Medical Commissions during the defined period that were specifically related to general surgeons. Files were included if they were complete and contained all the required variables.

The files were excluded if they lacked essential information or had incomplete documentation relevant to the study variables. To reduce the selection bias, only cases with complete documentation of all the key study variables were included. Data extraction was conducted in a standardized manner to maintain consistency and reliability.

Data collection and data sources

Following the acquisition of all the necessary institutional and legal approvals, the research team reviewed malpractice case files submitted to LMO. From the overall pool of complaints, those specifically related to general surgeons were identified and selected for inclusion. Data were manually extracted using a structured form designed by the research team to ensure consistency and accuracy. The extracted information encompassed a range of variables, including demographic details of the plaintiff such as age, sex, marital status, education level, and occupation. Case-related information included the year the complaint was filed, the type of surgery involved, and the healthcare facility where the procedure took place. Legal aspects were also documented, such as the type and cause of the alleged malpractice, any complications that resulted, the final verdict, and any financial compensation awarded. Additionally, the underlying reasons and motivations for filing the complaint from the patient's perspective were recorded.

Ethical consideration

This study was approved by the Ethics Committee of Shahid Beheshti University of Medical Sciences (IR.SBMU.MSP.REC.1403.149). All the procedures were conducted in accordance with institutional guidelines. Considering the confidentiality of the contents of medical malpractice complaint files, in addition to obtaining written permission from the research committee of the General Directorate of Research Affairs and publishing scientific resources of the organization and presenting it to the senior officials of the General Directorate of Forensic Medicine of Tehran Province, the necessary permissions to access the contents of the files were obtained and in all stages of research and publication of research results, disclosure of confidential information of natural and legal persons was avoided.

Statistical analysis

Statistical analyses were performed using Microsoft Excel 2019. Descriptive statistics were used to summarize the data, and categorical variables were presented as frequencies and percentages. No inferential statistics were applied, as the study aimed to describe and summarize the distribution and characteristics of malpractice cases without hypothesis testing.

Results

During the study period, a total of 965 medical malpractice complaints were reviewed by the Medical Commission of the General Department of Legal Medicine in Tehran Province. Of these, 196 cases (20.31%) involved general surgeons. The fewest complaints related to general surgery occurred in 2018 (n=15; 7.65%), whereas the highest number was reported in 2022 (n=50; 25.51%).

Among the 196 general surgery-related cases, 180 plaintiffs (91.83%) were male and 16 (8.17%) were female, with 181 individuals (92.34%) being married. The age distribution showed that 34 plaintiffs (17.35%) were under 20 *yr* old, 103 (52.55%) were aged 21–40, 36 (18.37%) were between 41 and 60, and 23 (11.73%) were older than 60 *yr*. In terms of educational background, 23 individuals (11.73%) were illiterate, while 87 (44.38%) had not completed high school. A total of 52 plaintiffs (26.53%) held a high school diploma, and 34 (17.34%) had university-level education.

Moreover, regarding the occupational status, 29 (14.80%) were unemployed, 32 (16.33%) were housewives, 35 (17.86%) were students, 41 (20.92%) were formally employed, and 59 (30.10%) were self-employed or freelancers. The demographic and baseline characteristics of the plaintiffs are summarized in table 1.

With respect to the type of surgical procedure, 121 cases (61.73%) involved emergency surgeries, while 75 cases (38.27%) were elective. As for the type of healthcare institution, 43 cases (21.94%) occurred in university-affiliated hospitals, 35 (17.86%) in non-university public hospitals, 107 (54.59%) in private centers, and 11 (5.61%) in charity hospitals.

Table 1. Baseline characteristics of the plaintiffs

Characteristics	Levels	Frequency (percentages)
Age (*yr*)	≤20	34(17.35)
	21-40	103(52.55)
	41-60	36(18.37)
	>60	23(11.73)
Sex	Male	180(91.83)
	Female	16(8.17)
Married		181(92.34)
Education level	Illiterate	23(11.73)
	Below high school	87(44.38)
	High school diploma	52(26.53)
	University degree	34(17.34)
Occupational status	Unemployed	29(14.80)
	Housewives	32(16.33)
	Students	35(17.86)
	Employed	41(20.92)
	Freelancers	59(30.10)

Categorical data are presented as frequencies (percentages).

Table 2. Summary of characteristics of the complaints

Characteristics	Levels	Frequency (percentages)
Medical settings	University hospitals	43(21.94)
	Non-university hospitals	35(17.86)
	Private institutes	107(54.59)
	Charity hospitals	11(5.61)
Type of surgery	Elective	75(38.27)
	Emergency	121(61.73)
Cause of complaint	Financial loss	29(14.80)
	Negligence	21(10.71)
	Assert right	16(8.16)
	Retreatment	14(7.14)
	Lack of necessary expertise	22(11.22)
	Patient death	12(6.12)
	Organ failure/ complications	39(19.90)
	Mixed	43(21.94)

Categorical data are presented as frequencies (percentages).

An analysis of the motives for filing the complaints revealed a variety of reasons. The most common was a desire for financial compensation (n=29; 14.80%), followed by concern for preventing future negligence (n=21; 10.71%), and seeking accountability and professional discipline (n=16; 8.16%). Other motivations included requests for re-treatment (n=14; 7.14%), perceived lack of medical expertise (n=22; 11.22%), and death of the patient (n=12; 6.12%). In 39 cases (19.90%), the complaint was due to organ failure or functional impairment, and in 43 cases (21.94%), multiple motives were reported. These distributions are illustrated in figure 1, and the key complaint characteristics are detailed in table 2.

In 32 cases (16.33%), the patient's underlying medical condition contributed significantly to the outcome, with minimal or no fault attributed to the surgeon. Additionally, 63 plaintiffs (14.32%) reported that they were informed of the malpractice by consulting other physicians or specialists, prompting them to file a complaint. A verdict of malpractice was issued in 77 cases (39.28%). Among these, 7 patients (9.10%) died as a result of the malpractice, while 70 patients

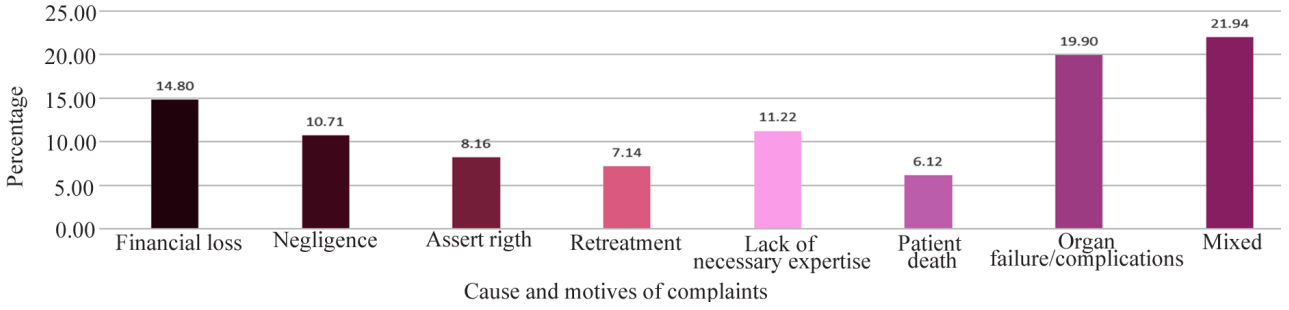

Figure 1. Causes and motives of registering a medical complaint.

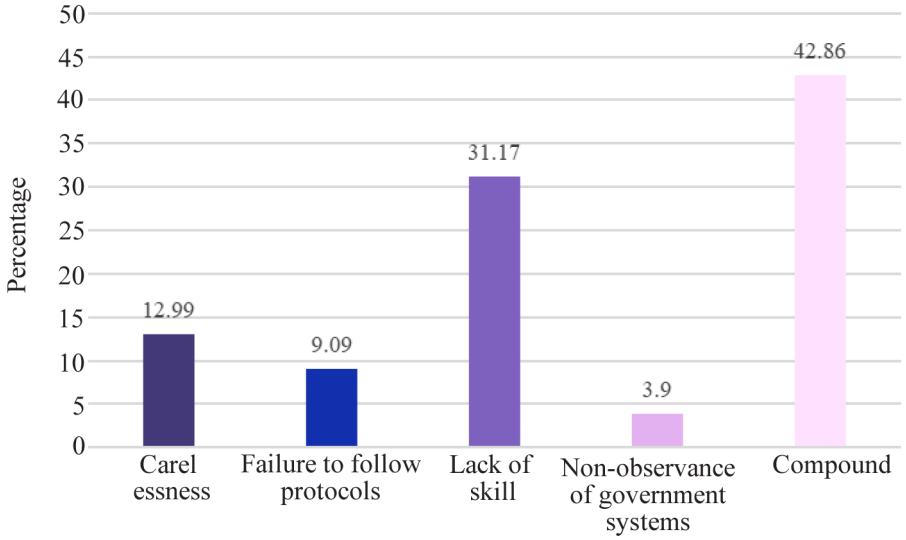

Figure 2. Types of medical malpractices.

(90.90%) experienced organ failure or long-term functional impairment.

An assessment of the types of malpractice in these 77 confirmed cases indicated that carelessness was the cause in 10 cases (12.99%), while failure to adhere to clinical protocols or inattentiveness was noted in 7 cases (9.10%). Lack of professional skill was identified in 24 cases (31.17%), and non-compliance with governmental regulations in 3 cases (3.90%). In 33 cases (42.86%), a combination of two or more factors contributed to the malpractice, categorized as compound errors (Figure 2).

Regarding the financial compensation, penalties were calculated based on a percentage of the full Diyya (blood money) as defined under Iranian law. In 34 cases (44.16%), compensation was less than 5% of the total Diyya. In 17 cases (22.08%), it ranged from 6% to 10%; in 13 cases (16.88%), from 11% to 20%; and in 9 cases (11.69%), from 21% to 40%. In 4 cases (5.19%), the compensation exceeded 41% of the total Diyya. The details are provided in table 3.

Table 3. Characteristics of the malpractice cases

Characteristics	Levels	Frequency (percentages)
Outcome	Functional impairment	70(90.90)
	Mortality	7(9.10)
Types of malpractice	Carelessness	10(12.99)
	Failure to follow protocols	7(9.10)
	Lack of skill	24(31.17)
	Non-observance of government systems	3(3.9)
	Compound	33(42.86)
Financial compensation	≤5%	34(44.16)
	6-10%	17(22.08)
	11-20%	13(16.88)
	21-40%	9(11.69)
	>40%	4(5.19)

Categorical data are presented as frequencies (percentages).

Additionally, the analysis of verdict outcomes by medical setting revealed significant variation. Among the 43 cases related to academic hospitals, 34 (79.07%) resulted in acquittals, and 9 (20.93%) in findings of malpractice. Of the 35 cases associated with non-university public hospitals, 27 (77.14%) ended in acquittals and 8 (22.86%) in guilty verdicts. In contrast, 107 cases from private hospitals showed a higher rate of fault, with only 51 (47.66%) acquittals and 56 (52.34%) found guilty. Among the 11 cases from charity hospitals, 7 (63.64%) were acquitted, and 4 (36.36%) resulted in a verdict of fault.

When examining the outcomes by type of surgery, 121 complaints were associated with emergency procedures, of which 73 (60.33%) resulted in acquittals and 48 (39.67%) in malpractice verdicts. Among 75 elective surgery cases, 46 (61.33%) were

acquitted, while 29 (38.67%) were found to involve negligence.

Discussion

This study investigated the patterns, causes, and outcomes of malpractice complaints involving general surgeons referred to the Forensic Medicine Commission of Tehran from 2016 to 2022. Of the 196 complaints related to general surgery, 39.28% resulted in a confirmed malpractice verdict. Private centers accounted for the majority of cases (54.59%) and also had the highest proportion of proven malpractice (52.34%). Emergency surgeries were more commonly involved, and the most frequent causes of malpractice included lack of skill and carelessness. Mortality was confirmed in 9.10% of the proven malpractice cases, while the rest involved organ failure or long-term impairment. Notably, 66.23% of the compensations were below 10% of the full Diyya, reflecting the relative low severity of harm in many cases.

These findings align with prior national studies indicating that general surgery consistently ranks among the top three specialties with the highest number of complaints, alongside obstetrics and orthopedics (2). Similarly, in a study of 125 general surgery complaints from 1998–2003, the malpractice rate was slightly higher (52%) than in the present study's cohort, which may reflect improvements in practice standards or variation in case complexity (13). Another report from cardiovascular surgery malpractice in Tehran noted a 48.2% malpractice confirmation rate, also predominantly in private centers (14), reinforcing the trend of higher legal risk in private institutions.

The current study's data support a growing body of evidence suggesting that patient dissatisfaction and complaints stem not only from technical failures but also from inadequate communication, unrealistic expectations, and insufficient informed consent (15,16). In multiple studies, failure to explain complications and poor doctor-patient interaction were more likely to trigger legal claims than the objective severity of harm (14,17).

The predominance of complaints against private centers may reflect several factors: limited oversight compared to academic institutions, and financial expectations associated with out-of-pocket expenses (2,18). University hospitals, with structured supervision, standardized protocols, and academic accountability, showed the lowest malpractice rates, consistent with prior literature (2,14).

The study findings on the types of malpractice, primarily technical incompetence and carelessness, are echoed in studies across various specialties (12,17). These suggest a persistent need for targeted training in surgical technique, intraoperative decision-making, and postoperative care. Importantly, the high prevalence of compound faults—cases involving multiple simultaneous errors—signals the systemic nature of some failures (2).

One concerning insight is the frequent assignment of full responsibility to general surgeons, even when systemic, team-based, or infrastructural deficiencies contributed to the outcome. Other factors such as hospital management, inadequate equipment, or interventions by unqualified personnel often escape scrutiny, a bias noted in similar forensic analyses (18).

Several contextual factors help explain the persistent rise in malpractice complaints. Shifts in the doctor-patient relationship, driven by increasing medical specialization, financial burdens, and greater patient awareness of legal rights, have led to reduced trust and increased litigiousness (4). Despite technological progress and the expansion of diagnostic and treatment services, patient dissatisfaction continues to rise, with poor communication identified as a primary driver of complaints (19). Studies have shown that patients often do not receive sufficient information about the risks or outcomes of their treatment, contributing to the feelings of neglect and suspicion, particularly when complications arise (20).

Moreover, the majority of proven malpractice cases in this study were relative rather than gross in nature, with over two-thirds resulting in compensations below 10% of the full Diyya. This aligns with prior findings indicating that many complaints are based on procedural issues or perceived ethical breaches rather than catastrophic harm (15). The prevalence of such complaints underscores the importance of ethical conduct, transparency, and patient education in medical practice.

To address the rising trend of complaints and malpractice verdicts, several measures should be considered. These include improving communication

and informed consent, enhancing the supervision in private centers, regular Continuing Medical Education (CME) focused on medico-legal aspects, and implementing risk management systems.

This study has several limitations that should be acknowledged. As a retrospective descriptive analysis based solely on files submitted to the Forensic Medicine Commission of Tehran, the findings may not be generalizable to other regions or healthcare systems with differing legal, institutional, and clinical contexts. Additionally, the cross-sectional nature of the study and use of medical records, limited the ability to incorporate all the relevant variables including socioeconomic status or underlying disease of the patients. More comprehensive studies with larger samples sizes are needed for more definitive findings.

Conclusion

In conclusion, this study demonstrated that nearly 40% of the reviewed claims resulted in confirmed malpractice, with private centers disproportionately represented in both the volume and severity of cases. The predominance of emergency surgeries, technical incompetence, and carelessness as leading causes of malpractice underscores the need for system-wide improvements in surgical education, clinical oversight, and procedural standards.

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Ethical statement

The authors tried to keep the information of the patient confidential and the results were published anonymously.

Conflict of Interest

There is no conflict of interest in this study.

References

1. Magowan D, Evans M, Burton L, Smith L. Medicolegal claims in general surgery: a 10-year retrospective review of claims against the NHS in England. Ann R Coll Surg Engl 2023;105(7):664-71.

2. Najari F, Mostafazadeh B, Soleimani Natanzi L. Complications of laparoscopic and laparotomy surgeries in the department of Tehran legal medical committee in 2011-2016. Int J Med Toxicol Forensic Med 2019;9(2):83-90.

3. Haghshenas MR, Amiri AA, Vahidshahi K, Rezaee MS, Rahmani N, Pourhossen M, et al. The frequency of malpractice lawsuits referred to forensic medicine department and medical council. J Mazandaran Univ Med Sci 2012;22(86):244-51.

4. Hanganu B, Iorga M, Muraru ID, Ioan BG. Reasons for and facilitating factors of medical malpractice complaints. What can be done to prevent them? Medicina (Kaunas) 2020;56(6).

5. Vaziri S, Fakouri F, Mirzaei M, Afsharian M, Azizi M, Arab-Zozani M. Prevalence of medical errors in Iran: a systematic review and meta-analysis. BMC Health Serv Res 2019;19(1):622.

6. Mahfouzi A, Taghadousi Nezhad F, Abedi Khorasgani H. Medical malpractice cases investigation of complaints referred to the commission's legal medicine organization in the field of anesthesia in the six years leading up to the Persian date Esfand 1999. J Leg Med 2002;8(26):4-10.

7. Raeissi P, Sepehrian R, Afshari M, Rajabi MR. Medical malpractice in Iran: A systematic review. Med J Islam Repub Iran 2019;33:110.

8. Abbasi MMH, Amyan A, Safari S, Tahghighi MM, Robati FK, Langari AA. Medical malpractice cases in Kerman province, Iran (2010-2014). J Kermanshah Univ Med Sci 2020;24(2).

9. Ranaei A, Gorji HA, Aryankhesal A, Langarizadeh M. Investigation of medical error-reporting system and reporting status in Iran in 2019. J Educ Health Promot 2020;9(1):272.

10. Karimi A, Javaherkalam MH. Transformation of the basis of medical civil liability in french law: solutions for changes in Iranian law. J Legal Stud 2024;16(2):43-80.

11. Nasirifar1, 2 E, Bashokuh M. Study civil liability arising from omission in Iran's legal system. Iran J Soc Sci Hum Res 2017;5(1).

12. Nobakht A, Zali M, Mahdavi M, Nourozi A. Causes of patient complaints, physician referred to the Medical Council of Tehran. J Med Council Islam Rep Iran 2000;18(4):295-303. Persian.

13. Sadr SS, Ghadyani MH, Bagher Zadeh AA. Assessment of records of complaints from medical malpractice in the field of orthopedic, in the coroner's office of forensic medicine, province of Tehran, during 1988 to 2003. Iran J Forens Med 2007;13(2):78-86.

14. Sh K, Mostafazadeh B, Sh H, Emamhadi M. Medical malpractice in cardiovascular surgery; cases referred to Tehran forensic medicine organization during 2011-13. Int J Med Toxicol Forens Med 2015;5(4):207-13.

15. Hejazi S, Zeynali M, Farokh EH. Study of pediatric malpractice claims registered at Urmia Medical Council during 10 year period (1375-1385). 2009. Persian.

16. Khara A. Descriptive analysis of medical malpractice complaints from general surgeons in Tehran 2012–2013; a short report. J Police Med 2016;5(1):1-6.

17. Darroudi A, Abbasi A, Shayestehazar M. Investigation of malpractice claims concerning orthopedic surgeons in Sari, North of Iran, 2015-2020. J Forens Sci Res 2023.

18. Aghakhani N, Cheraghi R, Zarei A, Alinejad V, Nazimi N, Rahbar N, et al. Study of causes of health providers' malpractices in records referred to forensic medicine organization in Urmia, during 2009-2013. Med Law J 2017;11(42):83-100.

19. Hickson GB, Jenkins AD. Identifying and addressing communication failures as a means of reducing unnecessary malpractice claims. N C Med J 2007;68(5):362-4.

20. Birkeland S, Bismark M, Barry MJ, Möller S. Does greater patient involvement in healthcare decision-making affect malpractice complaints? A large case vignette survey. PLoS One 2021;16(7):e0254052.