

REVIEW

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# Medical malpractice's impacts and simulation training's ability to diminish its effects: a systematic review

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## Abstract

Medical malpractice is described as an error made by medical providers towards their patients. For many years, this form of negligence has permeated healthcare and continues to leave a negative impact. Medical malpractice's impact influences medical providers, families, and patients. This review article aims to explore the presence of medical malpractice in the healthcare setting and how it leaves an imprint on all parties involved through findings included in the relevant literature. It has been proved that medical errors cause medical providers to view their patients as future plaintiffs and practice defensive medicine. This practice leads to unnecessary and often harmful implications on patient care. Additionally, it has been proven that the impacts of medical malpractice especially harm patients who are deterred physically, mentally, socially, and financially. Despite the extensive harm caused by medical malpractice, it is a dilemma that could be reduced through mandated simulation training for health professionals. Simulation training has proven successful in limiting medical malpractice and if applied on a larger scale could lead to even better results.

**Keywords** Medical malpractice, Simulation training, Systematic review, Medical education, Healthcare management

## Introduction

Medical malpractice is a term that we hear repeatedly in many healthcare conversations. The term has become very common, but what exactly is medical malpractice? Medical malpractice, which is often also referred to as medical negligence or medical error, is when a healthcare provider provides inadequate treatment or care to their patients potentially causing harm or even death to the patient [1]. The commonality of this term in healthcare discussions is primarily due to its high frequency and occurrence. In a news release regarding medical errors within the USA, Johns Hopkins Medicine reported that about 99% of physicians face at least one medical malpractice-related lawsuit by

the age of 65 [2], demonstrating how inevitable medical malpractice has become among present-day doctors. Honor Whiteman, a news writer for Medical News Today quantified the occurrence of medical malpractice within healthcare by reporting that there are roughly 12,000,000 American misdiagnoses a year [3]. Misdiagnosis is a form of medical malpractice and having roughly 1 in 20 Americans experience such malpractice yearly emphasizes the large scale that medical malpractice has reached. The high occurrence of medical malpractice is also linked to significant implications. In the same news release by Johns Hopkins Medicine, it was also reported that medical malpractice causes 10% of all U.S. deaths [2], making it the third leading cause of death in the USA. The startling frequency of medical malpractice within healthcare and its dreadful consequences, raises the question, what impact does medical malpractice have on both the provider and the patient? The impacts of medical malpractice are severe and are

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predominantly harmful to both providers and patients. Cases of medical malpractice harm the psychological well-being of providers and cause a harmful change in physician practice, while also causing mental, social, physical, and financial harm to patients.

### Impacts on providers

Being that medical malpractice is an act that is initiated by medical providers, medical providers are one of the first that are directly impacted by this sort of malpractice. In a confidential telephone survey conducted by Marta Vizcaíno-Rakosnik and peers, it was reported that the litigation process involved in medical malpractice led to high stress levels in over half of the participating physicians, with no difference in the stress levels for physicians who have current or closed cases [4]. This illustrates the mental health consequences caused by medical malpractice on medical providers as it leads to a state full of stress and anxiety. Almost all physicians are involved in at least one medical malpractice lawsuit throughout their career, thus it can be inferred that the mental state of many physicians is inhibited by the medical malpractice lawsuits or the possibility of such lawsuits, which may follow them throughout their careers.

Furthermore, it was evident that due to medical malpractice litigation, physicians alter the care they provide their patients. It was also reported by Vizcaíno-Rakosnik and her peers that almost half of the participants had a change in their practice and started viewing patients as potential plaintiffs [4]. Physicians adjusted their treatment of patients by becoming overly cautious and using a form of medicine referred to as defensive medicine. The use of defensive medicine may involve ordering extra stains, obtaining numerous other opinions, recommending additional surgical procedures, or even giving the most severe diagnosis for cases that may not warrant such a diagnosis. Providers go out of their way to follow such protocols to avoid a scenario in which their patients end up turning into plaintiffs. This was further supported by another study, where breast pathologists were surveyed about medical malpractice concerns and the care they provide their patients. It was found that most of the participants (about 88%) admitted to using at least one form of assurance behavior when dealing with their patients [5], demonstrating how cases of medical malpractice are altering the care that healthcare professionals are providing their patients. Healthcare providers are practicing extensive precautionary measures to avoid cases of medical malpractice, even if it means conducting practices that have no benefit to the patient and may inhibit their experience, which ultimately may cause a rift in the patient-provider relationship.

### Impacts on patients

Being that patients are on the receiving end of a medical error, there are some obvious impacts that the errors have on the patients. Cases of medical malpractice tend to be very harmful to the mental well-being of patients and their families. Based on a survey conducted in 2017, many patients who had experienced medical negligence had built up a sense of anger, anxiety, and abandonment, with some patients and families even developing severe cases of post-traumatic stress disorder (PTSD), depression, and suicidal ideation [6]. This emphasizes how cases of medical malpractice leave patients and their families in an unsafe and unhealthy mental state, leaving them traumatized and disturbed by their experiences. The development of disorders like depression and PTSD points to the long-term psychological harm caused by medical negligence. This long-term psychological harm to patients is also a significant factor in the lack of trust that patients have in their care providers [7]. Thus, the occurrence of medical negligence causes patients to develop feelings of detachment from their providers, creating a large gap between patients and their providers.

Furthermore, patients also endure a social and behavioral impact due to their experiences. Some of the patients who participated in the 2017 survey noted how they avoided contact with the healthcare system after their experiences [6]. The cases of medical malpractice are ultimately traumatizing patients causing them to actively avoid the healthcare system. Patients are losing a sense of safety in the healthcare environment, an environment that is supposed to be nurturing and full of comfort.

Moreover, in the 2017 survey, it was noted that patients who experienced medical malpractice also suffered physical harm. Many of the patients involved in the survey testified that the physical consequences of their negligence lasted long after the actual experience [6]. Patients experience extensive amounts of pain for long periods of time, due to an error that is often not at a fault of their own. In fact, the physical consequences of medical malpractice can be so long after the experience, that they can sometimes be life-altering. One of the patients participating in the survey stated that they became blind in both eyes due to an error in surgery [6], emphasizing the seriousness of medical errors and how harmful they can be to patients physically.

Finally, patients also experience financial hardships due to experiences of medical negligence. In the 2017 study conducted by Bell, it was found that many patients felt that they were not compensated for ongoing surgeries, therapies, and medication that resulted from their experiences [6]. This further illustrates how patients' experience of medical malpractice extends beyond physical, mental, and social harm but also harms patients

financially. Patients are obligated to pay costs that are primarily due to medical errors on their own without any means of assistance. This becomes an even larger issue when it becomes apparent that many patients reduce their working hours or just stop working because of their medical malpractice experience [6]. Thus, patients experience severe financial burdens because they may be incapable of working due to a medical error but are also obliged to pay for services that are necessary for their well-being.

This combination of mental, social, physical, and financial harm that patients endure due to medical negligence unsurprisingly leads to a deterioration in the patient-provider relationship as patients feel violated by their care providers.

### Creating change

Although the issue of medical malpractice is a large issue, it is one that can be reduced with the proper efforts. One solution to help reduce medical malpractice and therefore reduce its dangerous impacts is by mandating all healthcare providers to undergo simulation training once every 2 years. Simulation training is an approach that aims to provide caregivers with the necessary training in teamwork and communication with their peers, as well as refining their surgical skills. Research by Adam Schaffer, as well as other researchers, set to determine the effectiveness of simulation training, but through the lens of medical malpractice. The researchers compared cases of medical malpractice amongst obstetrician-gynecologists (ob-gyns) before and after taking part in simulation training. The comparison results demonstrated that the claims rate decreased significantly after ob-gyns attended simulation training [8]. Therefore, mandating bi-yearly simulation training for all healthcare providers can be an effective first step, as it will provide current and future medical providers with the most up-to-date research and training. This training will hopefully reduce the occurrence of medical errors and minimize their impacts.

### Conclusion

Both providers and patients are harmed by medical malpractice in their own unique way. Providers experience a great deal of stress and anxiety due to the possibility of committing a medical error and often decide to implement assurance behaviors to avoid any medical errors, even if those behaviors are unnecessary and deter the patient's experience. Likewise, patients are also afflicted by medical errors. Many patients become mentally distraught due to their experiences, often

leading to long-term psychological harm. Patients also experience disturbance in their social, physical, and financial well-being due to medical negligence. The impacts of medical malpractice on both providers and patients work to deter the patient-provider relationship and create wide gaps between patients and their care providers. In order to narrow the gap, it is imperative that researched methods, such as simulation training are adopted by healthcare providers across the USA.

#### IRB approval

None required.

#### Authors' contributions

Study conception and design: Mahmoud Ali; data collection: Mahmoud Ali; analysis and interpretation of results: Mahmoud Ali; draft manuscript preparation: Branden Tejada. All authors reviewed the results and approved the final version of the manuscript.

#### Funding

None.

#### Availability of data and materials

This manuscript does not contain original data.

#### Declarations

#### Ethics approval and consent to participate

N/A.

#### Consent for publication

N/A.

#### Competing interests

The authors declare that they have no conflict of interest.

Received: 18 September 2023 Accepted: 31 January 2024

Published online: 19 February 2024

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