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An Insight about Practices of Defensive Medicine Among Junior Physicians

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Abstract: Background: Defensive medicine has great impact on medical practice and population health. It may provide enhanced quality of services with good explanations to patients resulting in increased satisfaction. On the other hand, it might include unnecessary investigations, prescription of unnecessary treatments which may be expensive or dangerous for patients. Patient safety is a major concern in the medical field. Its importance is driven by the increasing amount of studies indicating an elevated rate of medical errors, together with well-reported incidents of medical error that have aroused public concern about the safety of modern health care delivery. Doctors should focus on preventing patient harm and protecting them from preventable adverse events To improve healthcare quality and ensure patient safety.

Keywords: defensive medicine, malpractice, physicians, medical errors

Introduction

Defensive medicine is defined as the overuse of the resources such as ordering unnecessary investigations, giving treatment, or performing procedures aiming at doctors' self-protection against claims rather than for the patient best interest **(1)**.

There are two types of defensive medicine: negative defensive medicine includes high-risk patients or procedures avoidance, while positive defensive medicine such as ordering unnecessary procedures and treatments, **(2)** which are done primarily out of fear of malpractice liability risk. **(3)** By definition, malpractice is the breach by a member of profession of either a standard of care or a standard of conduct. **(4)**

Malpractice claims have a great effect on the doctor's financial aspect and reputation. It also has an impact on his professional advancement and career. Egypt, as a developing country, faces the medical malpractice problem but the data are deficient regarding the magnitude of the problems. However, the Egyptian Medical

Syndicate sets new regulations in 2013 regarding the good medical practice in professional medical ethics The defensive medicine practice differs from a country to another affected by the surrounding circumstances. (5-7)

The defensive medicine practice usually results from the physician's sense of uncertainty, fear of liability, and poor outcomes. This usually directs the physicians to do unnecessary procedures that are not only increase the health-care expenses but also expose the patients to the risk of more hazardous interventions. (8) Some physicians use the expensive screening tools to avoid the feeling of low self-esteem and losing their reputation inside their community. (9) This could be the reflection of increased claims in the Greater Cairo wherein the period from 1973 to 1979, there were only 64 claims recorded that increased to be 2043 cases from 2000 to 2003. (10)

This sharp increase in the number of medical claims can be based upon the increased citizen's awareness by his rights and could be affected by the presence of the specialized lawyers who encourage the patients to raise lawsuits for financial compensations. (11)

Defensive medicine puts a high financial burden over different healthcare systems. In Italy, 10% of spent health-care resources were due to defensive medicine practice. (12) It affects the individuals before birth as it leads to increase the C-sections rate over the normal vaginal deliveries as a known pattern of defensive medicine practice. (13)

Prevalence of defensive medicine

The practice of defensive medicine is variable worldwide. Reports indicate that defensive medicine has been increasing in healthcare systems in recent years (12), with differences observed from one country to another, affected by the surrounding circumstances (11). It is a cross-sectional study including **Kasr Alainy hospital residents** Most respondents (88.9%) have experienced a sense of insecurity during their medical practice with a significantly higher prevalence among surgical specialties than non-surgical specialties (12). In a recent cross-sectional study from **Egypt** revealed that there is a high prevalence of both positive and negative defensive medicine practices among Egyptian physicians, with higher prevalence of negative defensive medicine practices as opposed to positive practices, and obstetricians reported the highest frequency of defensive medicine practices (13).

Practice of defensive medicine is due to multiple factors:

High rates of medical litigations:

Physicians often find themselves facing criticism, objections from patients and their families, and even social and media harassment if treatment goals are not achieved (7). Doctors in countries with greater incidence of medical lawsuit are more aware of and practice defensive medicine than doctors in countries with lower rates of medical litigation (11). In several European countries such as Denmark, Switzerland, The Netherlands, and the UK, medical malpractice litigation occurs less frequently compared to the USA which has very high incidence of defensive medicine (14). Malpractice Claim puts physician's finances, reputation, professional progress, personal relationships, and health at risk (15).

inadequate legislation protecting physicians from tort: A significant correlation was observed between the adoption of defensive medicine and the respondents' lack of confidence in their medical defense organization as well as increased medical indemnity premium expenses (3). In the United States, defensive medicine is commonly practiced. The number of lawsuits for medical malpractice has risen significantly, and defensive medicine has been shown to be directly related to this growth. American physicians are forced to maintain costly malpractice insurance to decrease the financial risks associated with such lawsuits. Consequently, in the absence of sufficient legislation protecting physicians from tort, concerns about malpractice liability are likely to be the predominant reason to act defensively (16). In several European countries such as Denmark, Switzerland, The Netherlands, and the UK, medical malpractice litigation occurs less frequently compared to the USA. In these countries, physicians are not financially accountable for malpractice or treatment-related

adverse events due to a medicolegal system where patients are compensated by the government, known as a no-fault system. However, defensive medicine seems also to be prevalent in Europe (5).

Drawbacks of defensive medicine

Defensive medicine has been associated with rising healthcare costs.

Defensive medicine often involves ordering unnecessary tests, procedures, and consultations to reduce legal risks. These additional interventions increase healthcare costs, impacting both individual patients and the healthcare system (19). More recent research has proposed that overall cost linked to defensive practices ranges from \$46 billion to \$300 billion, with most estimates falling between \$50 to \$65 billion (20). Although physicians direct up to 87% of total healthcare spending, multiple studies have found that they have a weak awareness of medical care costs. Similarly, traditional medical education programs have not adequately addressed the importance of cost awareness among learner (21).

Defensive medicine has been linked to excessive treatment, unnecessary prescriptions, and overdiagnosis of patients, resulting in a decrease in trust within the physician-patient relationship. The physician-patient relationship is a clinical interaction, and its effectiveness has a direct impact on care quality and treatment success. As a result, a healthy relationship must be established between a physician and his or her patient (37-39). This lack of trust can lead patients to question physicians' motives, while physicians may perceive patients as potential plaintiffs (5). When doctors request diagnostic tests without clear indications that these are beneficial for the patient, it can lead to exposure of patients to the risk of harm from unnecessary and sometimes invasive procedures. This risk may be greater than that of missing an unlikely diagnosis. Additionally, patients may suffer from psychological distress and anxiety due to unwarranted medical interventions (22). A false positive result from an unnecessary test can cause a deviation from the best course of treatment (8). A weak relationship can affect patient care adversely and has been shown to put a physician at higher risk of being charged for medical malpractice. Exposure to medical malpractice litigation among physicians has been linked to decreased job satisfaction and declining emotional well-being (23).

Fear of legal consequences may discourage experimentation and the implementation of new, potentially beneficial medical practices. Excessive laboratory testing necessitates a greater requirement for well-trained human resource personnel who are qualified to perform the tests and deliver reports and results. In short-staffed conditions, the hospital may need to hire more personnel to ensure prompt test processing, placing additional strain on hospital resources and operations. Excessive hospitalizations or procedures divert vital resources, prompting the need for more efficient utilization of existing resources and stresses an already overstretched healthcare system (24). Unrealistic tariffs and the absence of a well-implemented referral system have led to an increase in working hours and patient visits for some physicians, leading to fatigue and burnout (7).

Defensive medicine versus medical malpractice:

Medical malpractice is defined as any act or omission by a physician during patient care that deviates from recognized medical practice standards and causes harm to the patient (27). According to a Johns Hopkins University study, medical errors are the third leading cause of death in the United States, behind heart disease and cancer (28). Medical errors are thought to kill around 44,000 to 98,000 patients in the United States each year (29).

During the first six decades of the twentieth century, almost all malpractice lawsuits centered around medical errors specifically, errors of commission: instances where physicians made mistakes, such as causing injuries due to excessive radiation, complications arising from medical treatments both surgical and non-surgical, and failure to properly interpret radiographic films, cardiac and other laboratory test results, (30). However, as the 1950s progressed, physicians' errors gradually shifted from errors of commission to errors of omission.

Medical malpractice arises from negligence, errors, or failure to meet the standard of care, leading to patient harm (27). While defensive medicine is driven by fear of litigation and a desire to avoid malpractice claims, rather than patient benefit (14). Medical malpractice Results in direct harm or injury to the patient, leading to

potential legal action and compensation (21). While defensive medicine leads to unnecessary procedures that may not benefit the patient and can increase healthcare costs and risks without necessarily improving outcomes (1). Medical malpractice and defensive medicine are interconnected. The prevalence of malpractice litigation drives many healthcare providers to practice defensive medicine, contributing to rising healthcare costs and potentially impacting the quality of care (7).

When doctors request diagnostic tests without clear indications that these are beneficial for the patient, it can expose patients to the risk of harm from unnecessary and sometimes invasive procedures. This risk may be greater than that of missing an unlikely diagnosis. Additionally, over-testing can lead to incidental findings that may be misinterpreted (22). A decrease in trust within the physician-patient relationship. This lack of trust can lead patients to question physicians' motives (5), which can lead to: Non-compliance with necessary treatment: Distrust may cause patients to avoid necessary medical care, resulting in worsening conditions. The provider might then be criticized for not effectively communicating with the patients (23). Increased likelihood of litigation: Patients with anxiety and distrust are more likely to seek legal action, even if the provider does his best (7).

The fear of being sued for malpractice causes many healthcare providers to practice defensive medicine. To cover all potential bases and document thoroughness, even when clinical judgment suggests they are not needed. This behavior increases healthcare costs and can harm patients, potentially leading to the very lawsuit's providers aim to avoid (2). Avoiding High-risk Patients or Procedures: To minimize the risk of complications and subsequent litigation, even if it means not providing optimal care (10). Hesitation in Decision-making: necessary interventions or making decisions that could harm patients (15). Deviation from Best Practices: To avoid litigation, providers might follow legal advice rather than medical guidelines, which can result in complications (24).

Relationship between defensive medicine and patients' bill of rights and biomedical ethics

Patients' bill of rights which outlines the duties that hospitals and their employees have to patients and their families while they are hospitalized. This list provides patients with guidance and protection (40). The patients' bill of rights as mentioned by Rangraz, et al (2005) aims to achieve three major goals: is to help patients feel more confident in the health care system, The goal of the patients' bill of rights is to stress the importance of a healthy relationship between patients and their health care providers, is to stress the vital role patients play in maintaining their health by delineating rights and responsibilities for all individuals receiving care (41).

By standing up for their patients' rights and serving as their advocates, doctors can help foster a relationship characterized by mutual respect. Respect, dignity, and prompt attention to one's needs are fundamental human rights. It is the patient's right to ask their doctors questions and weigh the benefits, drawbacks, and expenses of potential treatments, as well as the costs of doing nothing, Feel free to inquire about their health state and get clarification if necessary. When making decisions about your care, listen to your doctor's advice, Doctors and staff must uphold the utmost secrecy and privacy when dealing with patients. In order to get a second opinion, get a copy of your medical records, Any possible conflicts of interest between a patient's doctor and other parties involved in the patient's treatment should be communicated to the patient. Keeping treatment consistent (42).

Since 2005, all hospitals in Egypt have been required to adhere to the patient's bill of rights as part of the Egyptian Hospital Accreditation standards. Egyptian patients have the right to choose their healthcare providers, to get health education in a safe atmosphere, to be educated about their treatment options, to participate in their care, to participate in research, to be treated with dignity and respect, to privacy and confidentiality, and to voice any objections they may have. In addition, a quality committee must be established by each Egyptian hospital in order to track and evaluate how well healthcare providers adhere to patient rights, as stated in the Egyptian Hospital Accreditation Standards. The goal was to guarantee various aspects of quality

while also increasing efficiency, effectiveness, productivity, and patient happiness with the care they received. **(43).**

Medical ethics is a branch of applied ethics that deals with ethical principles and values which guide the medical profession and practice. The term "medical ethics" was introduced by Thomas Percival, a physician from Manchester, United Kingdom, who authored a book with this title in 1803 (31). In 1985, Tom Beauchamp and James Childress introduced the principles of biomedical ethics, which have become widely disseminated and serve as the foundation for medical ethics in clinical and non-clinical settings. It encompasses four main principles, autonomy, non-maleficence, beneficence, and justice **(32,33).**

As a result of defensive medicine, patients may end up undergoing unneeded operations or tests that they weren't even aware of or wanted. This might compromise their autonomy. A doctor who is defensive in their practice is not likely to give a patient a comprehensive explanation of why they are getting a certain test or therapy (44). A doctor may not explain the purpose of the test clearly, instead saying something along the lines of "it is just to make sure," rather than "We are doing this to protect me against litigation." The doctor does not give the patient the chance to freely decide whether to accept or reject the test, and he or she is also uncertain about the true motivations behind the procedure. If the patient were aware of the clinician's bias, they would decline the test and look for another doctor. **(45).**

Defensive medicine may lead to overutilization of medical services, increasing the risk of harm from unnecessary tests and procedures. This practice conflicts with the ethical principles of non-maleficence and beneficence, as it can harm patients and is not necessarily in their best interest **(34).** As defensive medicine can contribute to the inefficient use of resources, increasing healthcare costs with no positive contribution to quality of care, this can limit resources available for other patients. This situation raises ethical concerns related to justice, as it affects the equitable distribution of healthcare resources **(22).**

Clinicians must prioritize patients' health interests over their own, acting in the patients' best interests as part of a fiduciary relationship. Defensive medicine contradicts these ethical commitments by prioritizing physician interests over patient care, creating a conflict of interest. This practice undermines the fundamental goals and purpose of medicine **(45).**

escalating tension between doctors and patients, including some high-profile incidents in recent years such as violence against doctors and even murders. It is thus a plausible hypothesis that Chinese doctors may be motivated to engage in defensive medicine to manage the threat of conflicts with patients or even malpractice litigation **(46).**

The public and patients' faith in medical professionals is undermined by defensive medicine. People would have less faith in doctors and other medical professionals if word got out that they behave more to protect themselves than to help their patients. Patients lose faith in doctors, visit fewer doctors, and pay less attention to what doctors say as a result, which is bad for medicine as a whole. Building reliable relationships between doctors and their patients gets more challenging. **(33).**

Methods of reduction of Defensive Mechanism

Clinical risk management (CRM): Clinical risk management (CRM) is a specific form of risk management that concentrates on clinical processes associated with patient care. Therefore, CRM is defined as all the systems, procedures, tools, and practices that help hospital staff identify, assess, manage, and minimize risks while providing clinical care and patient care **(25).** Enhancing junior physicians' training, educating them about defensive medicine and its drawbacks. Enhancing physicians' training, educating them about appropriate clinical care. Developing and disseminating clinical protocols or guidelines targeting common defensive medicine practices. Promoting the regular use of evidence-based medicine and structured care. Involving social workers in managing conflicts between physicians and patients. Implementing effective clinical records

management. Establishing clinical auditing systems and health debriefing processes. Forming committees to investigate malpractice cases to prevent recurrence. Upgrading mechanisms for complaints and inquiries. Exploring alternatives to the current litigation system, and Establishing health courts and specialized courts with judges trained in healthcare **(26)**.

Conclusion

Defensive medicine refers to practices motivated mainly by legal rather than medical purposes. Increased healthcare costs, overutilization of medical services, and potential harm to patients from unnecessary procedures are among its drawbacks. Defensive medicine is a prevalent practice within the medical community in Egypt. Our findings suggest that factors such as younger age, past malpractice claims, and incidents of workplace violence are associated with a higher likelihood of engaging in defensive medicine. It is important to implementing legal reforms aimed at establishing a comprehensive and transparent medical liability framework. This framework should offer clear definitions of medical responsibilities and malpractice while also ensuring access to legal guidance for physicians. Additionally, it is essential to enact laws that criminalize violence against healthcare professionals.

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