

Risks of Increased Defensive Medicine Due to the Medical World Digitalization and the Legal Implications Based on Indonesian Health Laws

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ABSTRACT: Digitalization in the healthcare sector, such as electronic medical records (EMR), has opened new horizons in the storage and management of patient medical records. This may also trigger an increase in defensive medicine practice, namely providing more careful medical treatment just to avoid potential lawsuits even though it is not always medically necessary. This research aims to study the risk of increased defensive medicine from the digitalization of medical records and the legal implications that arise and evaluate the extent to which legal regulations in Law Number 17 of the Year 2023 concerning Health in addressing defensive medicine practices. The method used is juridical analysis using a literature study approach that examines various legal literature, statutory regulations, and previous research related to digitalization in the medical world and the legal responsibilities of medical personnel. According to the results of this research, it was found that although digitalization can increase the efficiency of health services, it also risks exacerbating the practice of defensive medicine in Indonesia. Existing legal regulations are not yet responsive enough to overcome this challenge, especially in balancing the protection of the rights of both patients and medical personnel.

Keywords: Digitalization, Defensive Medicine, Electronic Medical Records, Health, Legal.



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INTRODUCTION

The era of globalization and digital advancement has revolutionized the medical sector, transforming the methods of delivering and receiving healthcare services. But, like everything else, every advancement may or may not pose risks of negative effects to the people. This study aims to investigate the risks associated with digital advancements in medical practice in Indonesia, specifically regarding defensive medicine.

Nowadays, various innovations enable interactions between doctors and patients without the need for direct meetings, thereby improving access to medical services, particularly in remote areas. Moreover, the implementation of technology such as electronic prescription systems minimizes the risk of prescription errors and expedites medication distribution, replacing conventional paper-

based methods. In addition to telemedicine and electronic prescriptions, the one that creates a huge breakthrough is the development of Electronic Medical Records (EMR) and Electronic Health Records (EHR) that indeed have contributed to cost reduction, increased awareness of medical conditions, improved service quality, and enhanced healthcare outcomes (Tapuria et al., 2021). Several studies also indicate that the use of Electronic Medical Records (EMR) and Electronic Health Records (EHR) can reduce the number of malpractice claims against physicians. For example, a study published in *JAMA Internal Medicine* revealed that doctors who utilize EMR and EHR have a significantly lower likelihood of facing malpractice claims compared to those who still rely on manual record-keeping systems. (Gray & Hagemeyer, 2012). This is presumed to be due to EMR and EHR enhancing the accuracy of medical documentation and facilitating easier access to patient information, thereby reducing the risk of medical errors that could lead to legal claims. However, digitalization also introduces significant legal and ethical challenges, including the need for efficient health data management to support early disease detection and forecast future medical conditions. Beyond technical aspects, digital health has become a critical issue in alignment with global efforts to enhance public well-being. The optimal utilization of technology can encourage individuals to pay greater attention to their physical and mental health. Thus, while the integration of technology in medicine offers numerous conveniences, careful adaptation strategies are essential to maximize its benefits and address emerging challenges effectively. Additionally, the comprehensive implementation of EMR is also associated with improvements in healthcare service quality, particularly for patients with complex medical conditions (Lin et al., 2020). In some medical facilities, electronic record-keeping systems assist physicians in making more accurate, evidence-based clinical decisions, thereby reducing the tendency to perform excessive medical procedures solely to mitigate potential litigation risks. With proper implementation and adequate training support, the use of EMR and EHR can serve as an effective tool in enhancing the efficiency and accuracy of healthcare services.

Nevertheless, some physicians remain concerned that electronic record-keeping may lead to medical records being misinterpreted in legal contexts. The implementation of Electronic Medical Records (EMR) and Electronic Health Records (EHR) plays a crucial role in influencing so many things, one of them something known as defensive medicine practices among healthcare professionals. Defensive medicine refers to medical practices undertaken by physicians not solely for the benefit of the patient's health but also as a protective measure against potential legal claims (Sekhar & Vyas, 2013). A study conducted by Nathalie et al. analyzed 50 other studies regarding defensive medicine, where 46% of those studies took the definition of defensive medicine as a health professional's deviation from sound medical practice motivated by a wish to reduce exposure to malpractice liability. (Baungaard et al., 2022). To be precise this is very reasonable because based on the study conducted by Tariq et al, the reported incidence of even the most common and simplest cause for patient injury which is medication errors in acute hospitals is approximately 6.5 per 100 admissions (Tariq et al., 2025). This means that there is a possibility that medical doctors make mistakes in 6 out of every 100 patients, which exposes them to the risk of legal action. This is because every clinical practitioner, including medical doctors, is responsible for all of their actions, especially those that result in medical negligence (Dahlawi et al., 2021).

In Indonesia Defensive Medicine practice often involves the administration of excessive or

unnecessary medical treatments or procedures. This phenomenon is evident from data on antibiotic usage, which indicates that approximately 38-43% of patients in primary healthcare services both private and public receive an excessive amount of antibiotics. This figure exceeds the World Health Organization (WHO) recommendation, which advises a rate of less than 30%. Based on a study of pharmaceutical sales data across 76 countries from 2000 to 2015, Indonesia is identified as one of the countries with the most significant increase in antibiotic use, ranking 29th.

This rise is influenced by various complex contributing factors (Limato et al., 2022). In addition to inappropriate antibiotic use, other medical practices such as tonsillectomy without clear indications and unnecessary hospital admissions also serve as examples of the practice of defensive medicine done by medical professionals (Kompas, 2013). The consequences of this practice extend beyond increased healthcare costs to a heightened risk of unnecessary side effects or complications for patients. Excess testing and procedures for instance often do not have a meaningful impact on the patient's health, so instead of receiving an effective and efficient therapy for their condition, the patient receives therapies that may result in a waste of resources which actually could benefit more when it is deployed elsewhere where it is truly needed (Adhikari et al., 2022). One of the main factors that causes a medical doctor to practice defensive medicine in their may yet be as so simple is mostly the fear of legal consequences that can affect or alter their career or even end it entirely (Goetz et al., 2024). Although data on the prevalence of defensive medicine in Indonesia remains limited, indications of excessive drug prescriptions and inappropriate medical procedures are already a cause for concern, and when we combine and analyze it closely with other studies that have already been conducted by previous authors, we can get a picture of how this defensive medicine in Indonesia should be considered an increasing problem by studying the main factor that can influence a medical doctor practice defensive medicine, and connect it with the current conditions in Indonesia.

There are four main reasons that could possibly be the most common reasons for practicing defensive medicine, first one is patient-related reasons, the second is physician-related reasons, the third reason is organization-related reasons, and the fourth reason is society-related reasons (Kakemam et al., 2022). According to a study by Studdert et al. in Pennsylvania involving 800 physicians, 92% of doctors conducted additional imaging and diagnostic tests for legal protection, while 42% opted to avoid high-risk procedures and complex medical cases to reduce the likelihood of malpractice claims. A 2010 study by Gallup and Jackson Healthcare revealed that 73% to 92% of physicians in the private sector practiced defensive medicine, a significantly higher rate compared to 48% of physicians in the public sector. Meanwhile, research from Harvard Medical School indicates that defensive medicine has become embedded in the medical culture across various specialties (Sekhar & Vyas, 2013). Furthermore, a longitudinal study conducted by Rodriguez et al. (2007) found that 50% of emergency department physicians in California expressed concerns about potential lawsuits, which directly influenced their medical decision-making. A similar pattern was strictly observed in a 2006 study in Japan involving 131 gastroenterology specialists, which revealed that fears of litigation impacted their clinical practices. These findings indicate that defensive medicine is not an uncommon practice but rather a global trend in the medical field. Its consequences extend beyond increasing healthcare costs, as it may also compromise the quality of care due to the unnecessary use of medical procedures. Therefore,

effective strategies are needed to address litigation-related concerns, ensuring that physicians make medical decisions based on clinical necessity rather than merely avoiding legal claims. If then, this should raise questions regarding defensive medicine practice in Indonesia, even though there are not so many studies that focus on defensive medicine, we can already see the shift of father-child relation turning into a partnership relation within a therapeutic transaction between a doctor and a patient which the goal is to achieve balanced power between patient and doctor ever since Indonesian Government started to create specific laws relating to the medicine world. It started with Law Number 23 of the Year 1992 concerning Health, which was updated into Law Number 36 of the Year 2009 concerning Health, and the latest is Law Number 17 of the Year 2023 concerning Health. This shows that Indonesia has begun to focus on Health Laws. Along with the ever development of the law regarding medicine, inevitably it will affect medical doctors and their medical practice, in relation to the medical profession we can see numerous national media outlets have widely reported allegations of medical malpractice involving medical doctors. Between 2006 and 2012, there were 183 recorded cases of alleged medical negligence (Lajar et al., n.d.). Of these, 60 cases involved general practitioners, 49 were attributed to surgeons, 33 involved obstetricians, and 16 cases were related to pediatric specialists. The remaining cases, each numbering fewer than ten, involved various other medical disciplines. Interestingly, even doctors who have carried out their medical practices in accordance with established standards still find themselves facing legal action and, in some cases, even imprisonment (Theresa Almarani Salindeho et al., 2023). Now, when we connect the relation between these fears of litigation with the development of EMR and EHR then every patient medical history which will be properly recorded and can easily be accessed, means that every mistake no matter how small, may or may not carry risks to result and end in some form of legal consequence. Medical malpractice remains a recurring issue in Indonesia, with incidents still being reported up to the present time (Ikhwan et al., 2024).

In the current era, health law continues to evolve and attract significant attention, both in the news and on social media. Consequently, technological advancements such as Electronic Medical Records (EMR) and Electronic Health Records (EHR) can document a patient's medical history in detail, including all past treatments received. This, in turn, increases the likelihood that errors made by previous physicians will be more easily detected either by current treatment physicians or by the patients themselves, thereby heightening the risk of malpractice claims. Based on the discussion above, the author feels the need to study the connection between the fear of litigation and the data transparency provided by EMR and HER and the risks of increased practice of defensive medicine in Indonesia. Through this study, the author aims to examine defensive medical practices in Indonesia, focusing on legal challenges and the urgency of policy reforms to enhance the national healthcare system. The novelty of this research lies in its analysis of the relationship between defensive medical practices and the legal framework, as well as efforts to propose specific and contextually relevant policy reforms aligned with the Indonesian health law landscape.

METHOD

This research is normative legal research using a statutory and conceptual approach, which focuses on examining legal norms as found in statutory regulations, legal doctrines, and scholarly opinions.

The primary approach used is the statute approach, whereby the analysis is centered on laws and regulations relevant to the issue of defensive medicine in Indonesia, such as Law Number 17 of 2023 concerning Health and its implementing regulations.

The sources of legal materials consist of primary legal materials, including statutory texts, official legal documents, and relevant court decisions, as well as secondary legal materials, such as peer-reviewed journal articles, legal textbooks, and expert opinions. These materials are obtained through library research.

To analyze the collected data, this research adopts a descriptive-analytical approach, aiming to identify trends, underlying factors, and the impact of defensive medical practices, particularly within the legal healthcare system. A library-based approach is selected due to the limited availability of empirical data on defensive medicine in Indonesia, making a literature-based analysis the most appropriate strategy to gain a comprehensive understanding of this phenomenon. Through this method, the study is expected to provide a strong theoretical framework regarding the relationship between defensive medical practices and healthcare regulations. Moreover, the findings of this study are anticipated to serve as a foundation for policymakers in formulating more effective regulations to mitigate the negative consequences of defensive medicine while enhancing patient-centered healthcare services based on clinical needs.

RESULT AND DISCUSSION

Defensive medicine refers to a medical practice undertaken by physicians primarily to avoid legal liability rather than being solely based on the medical needs of the patient (Ünal & Akbolat, 2022). This practice is categorized into two forms: positive defensive medicine and negative defensive medicine. Positive defensive medicine involves excessive medical interventions, such as unnecessary diagnostic tests, hospital admissions without clear indications, and specialist consultations that are not essential (Sekhar & Vyas, 2013). Additionally, physicians may provide more detailed medical documentation or perform invasive procedures even in the absence of strong indications. Conversely, negative defensive medicine occurs when doctors avoid certain medical actions that could benefit patients due to perceived high legal risks. This includes refusing to treat patients with complex medical conditions or being reluctant to adopt new treatment methods that may lead to litigation. One of the primary factors driving defensive medicine concerns legal claims, because a medical doctor or dentist, while practicing their profession, may at times commit an error that results in outcomes contrary to what was intended, and in certain cases, this may escalate into conduct considered a criminal offense (Ramadhani, n.d.). Many physicians believe that the legal system does not always favor healthcare professionals, is slow in resolving cases, and lacks clear boundaries in defining medical malpractice. As a result, they adopt a more cautious approach, either by providing excessive care or avoiding high-risk medical cases. Furthermore, legal uncertainty regarding medical service standards compels doctors to adopt a more defensive stance in making clinical decisions. When a doctor is suspected of committing malpractice, it is common for the patient or the patient's family to report the case to the police, often leading to a court trial. When a doctor is suspected of committing malpractice, it is common for the patient or the patient's family to report the case to the police, often leading to a court trial

(Gunawan Widjaja & M Hafiz Aini, 2022). For doctors, the existence of the public court system has long been a source of fear, because not only must they endure a drawn-out legal process, but they also face the risk of being ordered to pay compensation that can far exceed the fees they originally received. Additionally, such proceedings can severely damage the professional reputation they have built over the years (Ismail Koto & Erwin Asmadi, 2021). Another contributing factor is economic incentives, as physicians working in volume-based healthcare systems may be inclined to perform unnecessary medical procedures to increase revenue. Professional pressures and patient expectations also play a role, as doctors may feel compelled to take more aggressive medical measures to avoid patient dissatisfaction or criticism from colleagues (Katz, 2019). The impact of defensive medicine extends beyond increasing healthcare costs since it also poses risks to patients due to the possibility of unnecessary procedures or limited access to essential medical care that should have been provided.

According to Law Number 17 of the Year 2023 Concerning Health, Indonesia's healthcare system emphasizes the protection of healthcare professionals and legal certainty in medical practice. This law plays a vital role in regulating medical practice, ensuring legal protection for healthcare workers while upholding patients' rights. It aims to establish a fair and sustainable healthcare system by emphasizing non-discrimination, justice, and accessibility to healthcare services for all citizens. In medical practice, this regulation ensures that healthcare professionals have well-defined rights and obligations, including compliance with professional standards, medical service guidelines, and ethical codes. However, despite this legal framework, many doctors still feel vulnerable to malpractice lawsuits, which in turn encourages them to engage in excessive medical procedures or avoid high-risk, complex cases. The legal implications of defensive medicine in Indonesia may involve civil lawsuits, criminal charges, or administrative sanctions against medical practitioners. Law Number 17 of Year 2023, Article 305 paragraph (1), states that patients or their families who feel disadvantaged by the actions of medical personnel or healthcare workers in providing health services have the right to file a complaint with the authorized board. This provision grants individuals the right to report, in writing, any actions by healthcare professionals that they believe have caused harm or that may potentially cause harm. The existence of this regulation serves to provide legal protection for the public against unethical or harmful medical practices. According to data from the Indonesian Medical Disciplinary Board (MKDKI) in 2013, at least 93 complaints related to alleged medical malpractice were reported that year, if we continue the count over the past several years, there have been 150 reported cases of malpractice in Indonesia. As a result, 34 doctors received written sanctions, 6 were required to undergo additional education programs, and the most severe penalty was imposed on 27 doctors whose registration certificates were revoked automatically rendering their licenses to practice invalid (Maulana & Putra, 2023). According to Article 310 of Law Number 17 of the Year 2023 Concerning Health, in situations where medical personnel or healthcare workers are suspected of making professional errors that result in harm to a patient, any disputes arising from such incidents must first be resolved through alternative dispute resolution mechanisms outside of the court system (Marliana et al., 2024). Sadly, It has also been found that medical doctors who have been involved in lawsuits, even if the medical doctors who were accused are found not guilty, the psychological effect on them during the case proceedings and after is exhausting and affects their future work (Zeeman et al., 2020). This may cause medical doctors who did nothing wrong to choose to make peace just for the sake of

avoiding litigation despite the peace terms is unfair to the doctor. Lees-Haley identified a range of stress-related symptoms linked to legal proceedings, which he termed Litigation Response Syndrome (LRS), and in the context of medical negligence claims, additional terms have emerged to describe the psychological effects on healthcare professionals, including clinical judicial syndrome and medical malpractice stress syndrome (Tumelty, 2021). The psychological burden on doctors is substantial, as they must uphold their professional reputation, especially because they work in a service-oriented field. When a case proceeds to litigation, it becomes a matter of public record. If mediation fails, the case continues to court, where doctors are required to prove their innocence. This process demands a significant investment of mental energy, time, and possibly money, including costs for transportation to court, legal representation, and other anticipated or unanticipated expenses during the trial. This further supports the conclusion that fear of litigation is a logical and understandable reason for doctors to engage in defensive medical practices.

The implementation of Electronic Medical Records (EMR) and Electronic Health Records (EHR) has brought significant advancements to the healthcare system, particularly in improving the efficiency of patient record-keeping and data management (Uslu & Stausberg, 2021). The primary advantage of this system lies in its ability to provide accurate, real-time, and easily accessible patient information for healthcare professionals, thereby enhancing the quality of clinical decision-making (Lin et al., 2020). Studies indicate that EMR utilization enables more effective data analysis to identify disease patterns and optimize patient care, thereby supporting preventive measures within the healthcare system (Subrahmanya et al., 2022). But, despite their numerous benefits, the use of EMR and EHR can also contribute to the cause of defensive medicine practice. One of the key reasons is healthcare professional's heightened fear of legal claims due to the increased transparency of digital records (Uslu & Stausberg, 2021). In a digital system, every medical decision is thoroughly documented, making it possible for any errors or negligence to be used as evidence in legal proceedings (Rama Daud et al., 2024). Studies indicate that physicians who perceive their medical records as more widely accessible, including patients, are more likely to engage in excessive medical interventions, such as ordering additional diagnostic tests or referring patients to specialists without strong medical indications, as a protective measure against potential lawsuits.

Another factor driving defensive medicine is the increased administrative burden associated with EMR systems. Several studies reveal that doctors also often feel that digital documentation adds to their workload rather than facilitating clinical processes (Tapuria et al. 2021). This is due to the requirement for more detailed data entry and the need to document every medical action performed, which takes significantly more time compared to manual record-keeping (Anggi et al., 2020). From a legal standpoint, under Article 184 of the Indonesian Criminal Procedure Code (KUHAP), medical records are classified as documentary evidence, which can be utilized in criminal proceedings. One of the legal implications of EMR and EHR is their capability to establish proof of medical errors or negligence. If a physician fails to properly document medical actions or if there is a discrepancy between diagnosis and treatment, electronic records can serve as evidence of negligence. Legally, electronic medical records are recognized as legally valid evidence, as stated in Law Number 19 of the Year 2016 on Electronic Information and Transactions. Furthermore, Law Number 17 of 2023 mandates hospitals to adopt an integrated health information system, including electronic medical records, to ensure accurate medical documentation and protect

patient rights. In some cases, physicians proven to be negligent based on EMR documentation may face administrative, civil, or criminal penalties, depending on the severity of their negligence. For instance, if Electronic Medical Records (EMR) indicate that a doctor fails to deliver the standard of care that a reasonably competent physician with similar training and experience would be expected to provide under comparable circumstances, such deviations may be interpreted as negligence in the eyes of the law therefore that doctor risk facing medical malpractice Suits (Liang et al., 2023). Medical malpractice suits correlate with patient satisfaction since patient complaints represent a major source of medicolegal risk for physicians and healthcare organizations, as they can lead to formal investigations, damage to professional reputation, increased litigation, and potential disciplinary actions by regulatory bodies (Mostafapour et al., 2024).

However, the concept of patient satisfaction is inherently multifaceted and varies significantly depending on cultural, social, and institutional contexts, as well as individual patient expectations and experiences (Graham, 2016). In general, patients are less likely to raise complaints or pursue legal action when their symptoms have diminished or they have experienced recovery, even in situations where the diagnostic tests, procedures, or treatments administered were excessive, redundant, or not strictly aligned with standard medical protocols. This tendency stems from the fact that most patients are primarily outcome-oriented they focus more on the result, namely the restoration of their health, rather than scrutinizing the appropriateness, efficiency, or necessity of the medical interventions employed during the course of treatment. If the outcome is favorable and patients feel better, patients typically exhibit a high degree of tolerance toward any perceived over-treatment or medical overreach. Patients have a set of expectations regarding the behavior and professionalism of their doctors, and communication skills are the most influencing factors from a doctor that contribute to medical disputes (Liu et al., 2022). Patients expect physicians to be punctual, respectful, and to communicate effectively, preferably in a language that the patient understands well. Beyond medical competence, patients seek empathy, attentiveness, and respectful treatment throughout the clinical encounter. In other words, patients not only value the technical quality of the healthcare services they receive but also place significant importance on the interpersonal aspects of care, such as kindness, compassion, and courteous behavior (Batbaatar et al., 2017).

These human elements contribute greatly to the overall satisfaction and trust patients develop toward their healthcare providers. Effective communication between patients and healthcare providers, which includes interactions with nurses and doctors, clear explanations about medications, being attentively listened to, receiving respectful and courteous treatment, and experiencing timely responsiveness from hospital staff, has consistently been recognized as a central component in enhancing patient satisfaction across various clinical environments (Goodrich & Lazenby, 2023).

The sense of relief and satisfaction derived from human elements and medical recovery often overshadows any inclination to question whether the clinical decisions were proportionate to their actual medical condition. As a result, the critical evaluation of the therapeutic or diagnostic process whether it adhered to medical standards or involved potential overuse of resources tends to be minimal or absent entirely in medical practices, reducing the impetus for transparency, accountability, or quality improvement in clinical settings. As a result, this strongly influences

physicians to adopt a more cautious and conservative approach to medical decision-making in order to avoid omitting any critical information that could pose legal risks and to ensure that the outcome is as positive as possible (Rama Daud et al., 2024). Notably, even practitioners who have conducted their medical duties in strict accordance with established professional standards have been subjected to legal proceedings, with some resulting in custodial sentences (Theresa Almarani Salindeho et al., 2023).

Another factor that is also as important is that the latest Indonesian Health Law which is Law Number 17 of the Year 2023 Concerning Health does not specifically state explicitly that such defensive medicine practice is illegal. Within that Law, we can see that many things are regulated as abortion, as in Article 60 paragraph (1) it is stated clearly that Every person is prohibited from performing an abortion, except under criteria permitted in accordance with the provisions stipulated in the Criminal Code. And, the conditions that allow abortion is also regulated in the same article Paragraph (2) Article 60 paragraph (2) The implementation of abortion under the permitted criteria as referred to in paragraph (1) may only be conducted by Medical Personnel assisted by Health Workers who have the required competence and authority, in Health Care Facilities that meet the standards determined by the Minister; and, with the consent of the pregnant woman concerned and the consent of her husband, except in cases of rape. While the legal provisions on abortion are clearly defined, allowing for direct conclusions, the situation is quite different with regard to defensive medicine, such as excessive medical treatments, as this practice is not regulated in detail under Indonesian law.

Another problem that raises concerns even though Electronic Medical Records (EMR) and Electronic Health Records (EHR) have significant potential to enhance the efficiency and quality of healthcare services, their implementation must be accompanied by policies that mitigate negative effects, particularly those related to defensive medicine. This ensures that medical professionals can focus on making decisions based on clinical needs rather than legal concerns. However, effective implementation requires adequate infrastructure and proper training to ensure that healthcare professionals can use the system efficiently. But, in Indonesia, infrastructure related problems persist concerning data security, as reflected in past data breaches, such as the leakage of Social Security Administering Body for Health (BPJS Kesehatan) data (Nico Amon, 2022). In May 2020, approximately 91 million user data and 7 million seller data from Tokopedia were allegedly leaked. Additionally, 1.2 million user data from Bhineka.com were suspected to have been breached and sold on the dark web. Furthermore, around 2.3 million personal data from Indonesia's 2014 election voter list were reportedly extracted from the General Elections Commission's website. In March 2019, a hacker group known as Gnostic Players claimed to have sold 13 million user account data from Bukalapak, although Bukalapak stated that the hackers had failed to breach their security system. In August 2020, approximately 890,000 customer data from the fintech company Kreditplus were allegedly leaked and sold on the RaidForum platform. In September 2020, around 5.8 million personal data of RedDoorz app users in Indonesia were reportedly put up for sale. In April 2021, the personal data of approximately 130,000 Facebook users in Indonesia were allegedly leaked and disseminated on an amateur hacking site. Furthermore, in May 2021, hundreds of millions of Social Security Administering Body for Health (BPJS Kesehatan) member data were allegedly hacked and sold on the RaidForum platform for

approximately IDR 84 million (Rini Kustiasih, 2022).

So, in Indonesia despite the reinforcement of health law in Indonesia through Law Number 17 of the Year 2023 concerning Health, the development of technology regarding EMR and EHR to achieve the goal of patient data and history transparency, along with the concern of data breach risks means that every mistake made by medical doctors will be much easier to detect, therefore sadly and inevitably influencing fear in medical doctors pushing them into the practice of defensive medicine. Medical doctors will practice tests and procedures that have little clinical value but do it nonetheless for the reason of “just in case” (Ries & Jansen, 2021).

Based on the foregoing explanations, the author concludes that there are several key factors contributing to the rise of defensive medicine practices in Indonesia. The first factor is psychological in nature, namely the fear and anxiety experienced by medical professionals such as doctors, stemming from the transparency and potential leakage of digital medical records. The second factor relates to the regulatory framework of health law in Indonesia, where the practice of defensive medicine has not yet been systematically and comprehensively regulated under Law Number 17 of 2023 concerning Health. These two primary factors are interrelated and mutually reinforce the increasing risk of defensive medicine practices within the Indonesian medical profession.

CONCLUSION

Based on the study conducted by the author, several conclusions can be drawn. First, digitization in healthcare services has contributed to the rise of defensive medicine. Although technological advancements such as telemedicine, Electronic Medical Records (EMR), and Electronic Health Records (EHR) have significantly improved healthcare efficiency by streamlining documentation and enhancing access to patient information, they have also introduced new legal challenges. The increased transparency and structure of digital records have exposed healthcare professionals to higher legal scrutiny, prompting many to adopt defensive medical practices. These practices, driven by fear of litigation, often prioritize legal protection over patient-centered care, undermining the essence of effective and ethical medicine. Second, Indonesia’s latest health regulations, particularly Law Number 17 of 2023 concerning Health, may further encourage the practice of defensive medicine.

This is due to the law’s lack of explicit provisions ensuring legal certainty regarding excessive or unnecessary medical procedures. In general, patients in Indonesia are unlikely to file complaints if their symptoms have improved, even if the diagnostic or treatment processes were excessive. This tendency is driven by an outcome-based perspective—patients are more focused on recovery than on evaluating the proportionality of the treatment received. As a result, when patients perceive the outcome as successful, they rarely question whether the process was medically justified. This environment indirectly allows defensive medicine to grow, particularly as healthcare professionals become increasingly cautious about the legal implications associated with transparent digital documentation such as EMR and EHR.

Based on the discussion presented in this study, the author concludes that several strategic actions

can be undertaken to reduce the risk of defensive medicine, even as digitalization and the development of new medical regulations continue to advance. First, strengthening regulatory protection for medical professionals is essential. This includes a comprehensive revision of healthcare laws to clarify malpractice boundaries and provide stronger legal safeguards, enabling physicians to make patient-centered decisions without excessive legal pressure. Second, the optimization of EMR and EHR utilization must be prioritized. Governments and healthcare institutions should ensure that electronic medical record systems incorporate robust data protection mechanisms to prevent breaches, while also providing intensive training for healthcare workers to improve system literacy, enhance efficiency, and minimize administrative burdens.

Third, public education and awareness efforts play a crucial role. Educational campaigns promoting rational antibiotic use can help reduce patient-driven pressure that often leads to unnecessary prescriptions. Similarly, patient education regarding the purpose and benefits of EMR and EHR can foster greater acceptance and understanding of digital healthcare systems. Lastly, effective strategies to prevent defensive medicine require clearer and more simplified clinical guidelines, enabling medical professionals to practice evidence-based medicine with confidence and without fear of legal repercussions. These combined efforts can contribute to a more balanced, efficient, and ethically grounded healthcare environment.

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The Indonesian Criminal Code

The Indonesian Criminal Procedure Code

Law Number 17 of 2023 Concerning Health

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