Telemedicine Diagnosis Error Compensation Mechanism: Normative Analysis of Patient Health Law

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ABSTRACT

This article examines compensation mechanisms for victims of misdiagnosis in telemedicine services using a normative legal approach. The analysis focuses on the legal relationship between healthcare professionals' obligations, electronic system operators' responsibilities, and patients' rights to information, safety, and compensation. The normative framework includes regulations on telemedicine services, medical practice, healthcare workers, medical records, patient safety, personal data protection, electronic transactions, consumer protection, and civil and criminal liability for negligence. The study finds that compensation may be pursued through multiple complementary channels, including professional disciplinary processes, administrative enforcement against healthcare facilities, civil litigation for material and immaterial damages, consumer dispute mechanisms for digital services, and criminal proceedings in cases of serious negligence. Proof of liability is primarily assessed through three pillars. First, valid informed consent must include clear explanations of telemedicine limitations, risks, and referral options. Second, electronic medical records function as legal evidence and must be complete, accurate, and auditable, covering anamnesis, clinical reasoning, follow-up plans, and referrals. Third, health data governance requires strict integrity, confidentiality, and traceability, where data breaches may constitute an independent basis for compensation claims. This framework enables proportional allocation of responsibility among healthcare professionals, facilities, and platform providers based on proven causality. It enhances legal certainty, strengthens patient protection, and promotes accountability, documentation quality, and system security in telemedicine services.

INTRODUCTION

Patient safety has been a benchmark for the legitimacy of modern healthcare services for the past two decades because it is directly related to public trust, the quality of clinical decisions, and service financing. The literature on patient safety places clinical errors as a systemic problem that requires a normative reading of how professional obligations, facility governance, and accountability mechanisms are constructed. The National Academies report, To Err is Human, emphasizes that injuries resulting from healthcare services can arise from a series of inadequate decisions, communication, and work design, so that legal attention should not stop at who is at fault, but rather how standards of care are established, proven, and restored when harm occurs (Kohn et al., 2000). Challenges in developing a national health system, including from the aspects of law, access to services, and disease management, also contribute to the complexity of the healthcare landscape in Indonesia (Harianto et al., 2024). At this point, health law becomes a tool for linking patient rights norms, healthcare worker obligations, and service provider responsibilities. This framework is important because compensation mechanisms ultimately depend on the definition of error, causal relationships, and the extent of losses that can be assessed legally, while patient experiences often take the form of uncertainty and delays in treatment that are not always easy to map into legal categories.

The shift in service models towards remote services has expanded the scope for diagnostic errors (Khayru & Issalillah, 2022). Telemedicine shortens access times but lengthens the information

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chain: complaints are submitted via digital interfaces, data is obtained from patient devices, and physical examinations are replaced by visual representations and self-reported accounts. In this context, clinical decisions are highly dependent on the quality of incoming information, the structure of the interview, and the clinician's ability to assess the limitations of the medium. When the diagnosis is incorrect, patients may experience delayed therapy, incorrect therapy, or inappropriate referrals; the consequences can include additional costs, lost opportunities for recovery, and psychological burdens due to feeling unheard or misunderstood. The service quality agenda discussed in Crossing the Quality Chasm places coordination, communication, and process design as determinants of quality, so that every service innovation needs to be accompanied by regulations that ensure safety, accountability, and balanced recovery of losses (Institute of Medicine, 2001). In telemedicine, process design includes patient identification, clinical data verification, documentation, and referral decisions; all of which open up space for normative analysis of appropriate service standards and recovery mechanisms when those standards are not met.

In telemedicine practice, misdiagnosis is often intertwined with problems of proof. Patients generally do not have full access to assess whether the medical history is sufficient, whether the clinician's choice of questions is appropriate, or whether the decision to "observe" rather than "refer immediately" meets the standard of care. Meanwhile, service providers may face information limitations, network instability, or poor image quality, resulting in decisions being made based on incomplete data. This tension raises a legal question: when should a misdiagnosis be treated as an acceptable medical risk, and when does it constitute negligence that gives rise to compensation rights? Normative assessment requires careful mapping of the measure of "professional standards" in a remote medium, including the obligation to explain the limitations of telemedicine to patients, the obligation to refer when data is insufficient, and the obligation of auditable documentation. Here, electronic medical records and digital communication trails become key evidence, so the quality of documentation determines the success or failure of compensation claims.

In Indonesia, telemedicine is developing within a regulatory landscape that places patient safety, data protection, consent to treatment, and professional responsibility as its pillars. However, compensation mechanisms for victims of misdiagnosis through telemedicine are not always understood as a structured pathway; they are scattered across civil norms on unlawful acts and breach of contract, consumer protection norms, professional discipline norms, and health service administration provisions. As a result, victims often face a variety of forum choices, different standards of proof, and outcomes that do not always provide fair redress. The institutional responsibility of hospitals for errors committed by healthcare personnel is one of the key elements in this accountability system (Mening et al., 2023). From the perspective of clinicians and platform providers, the lack of clarity regarding compensation channels can encourage defensive practices that lead to excessive referrals or the rejection of certain cases, which ultimately reduces access. The need for normative analysis at this point is to develop a systematic reading of how positive law shapes patient rights, clinician obligations, and the responsibilities of telemedicine providers, and then assess whether this configuration is adequate to recover losses due to misdiagnosis.

In remote services, victims' experiences often include a sense of loss of control: communication is rapid, clinical decisions appear concise, and patients only realize errors when their condition worsens. This situation can trigger stress, anger, and a burden on families who must seek follow-up services, gather evidence, and negotiate with service providers. From a legal perspective, this experience must be translated into elements of action, error, causal relationship, and loss; the translation process often leaves a gap between the patient's sense of justice and the formal outcome. By linking the discourse of patient safety and service quality (Kohn et al., 2000; Institute of Medicine, 2001) to telemedicine, this study moves towards the core question: how does Indonesian law govern, prohibit, and provide redress when misdiagnosis occurs through digital media?

Diagnostic errors in telemedicine raise normative issues at the initial stage of the therapeutic relationship, namely patient consent and understanding. In clinical relationships, consent means more than a sign of agreement; it requires the provision of relevant information so that patients can make decisions that are in line with their values and interests. The biomedical ethics literature places respect for autonomy and the obligation of nonmaleficence as the basis for evaluating clinical actions, including when the choice of action is to "continue remote consultation" or "refer for direct examination" (Beauchamp &

Childress, 2009). In telemedicine, the limitations of physical examination and data reliability are often key issues. The problem is how to ensure that patients truly understand these limitations at the right time, and how to prove that understanding when disputes arise. If consent is based on incomplete or misunderstood information, compensation claims may be based on a breach of the duty to inform, rather than solely on clinical error. However, consent documentation practices in telemedicine still vary, so the line between medical risk and informational negligence is often blurred.

Another issue relates to professional standards of care in situations where information is limited. Normatively, professional standards are usually derived from commonly accepted practices and scientific evidence, then tested through expert assessment. In telemedicine, these standards must address the question of whether clinicians are required to compensate for the limitations of the medium with additional measures such as structured questioning, requests for photographs with specific criteria, the use of decision support, or earlier referrals. Patient safety reports emphasize that errors often arise from system failures, including communication and process design, so that negligence assessments often require an examination of workflows, training, workloads, and supervision mechanisms (Kohn et al., 2000). The problem is that telemedicine systems involve additional actors such as platforms, network providers, and data governance; the involvement of these actors complicates the attribution of responsibility. When a diagnosis is incorrect, the legal question is not simply whether the clinician was at fault, but whether the system that framed the decision fulfilled its due diligence obligations. This complexity of attribution affects the design of compensation mechanisms because it determines which party is liable for damages.

In addition, there are measures of loss and appropriate remedies when misdiagnosis occurs through telemedicine. Losses can take the form of follow-up treatment costs, loss of income, and psychological distress. However, telemedicine leaves a digital trail that can aid in proving negligence, while also giving rise to new disputes regarding the completeness of medical records, data ownership, and patient access to consultation records. In biomedical ethics, the principle of justice demands a fair distribution of burdens and benefits, as well as proportional compensation for the injured party (Beauchamp & Childress, 2009). In practice, patients often want two things: acknowledgement of wrongdoing and compensation for losses. Compensation mechanisms that only emphasize payment without transparency may fail to restore a sense of justice, while mechanisms that require heavy proof may close access for patients with limited resources. Service quality reports place patient-centeredness as the goal, so redress needs to consider the patient's experience as a subject, not merely an administrative object (Institute of Medicine, 2001). The tension between the formality of proof and the need for redress that feels fair is at the heart of a normative problem that needs to be mapped systematically.

Telemedicine has become an increasingly common form of service used by the public, both through health facilities and digital platforms. Its widespread use increases the likelihood of disputes, not because telemedicine is synonymous with error, but because the scale of the service makes incidents that were previously rare more easily observable and documented. In this situation, the legal debate has shifted from the question of "is it permissible or not" to "how to ensure recovery when losses occur". A clear compensation mechanism provides certainty for patients regarding the path to recovery, and provides certainty for clinicians and service providers regarding the standards that must be met. This certainty is relevant to service quality because it encourages disciplined documentation, more orderly risk communication, and measurable referral management.

In addition, developments in health data management mean that misdiagnosis through telemedicine cannot be separated from issues of medical records, access to records, and personal data protection. In modern medical disputes, written and digital evidence often determine the outcome, so rules on recording and access become part of the compensation mechanism itself. When patients find it difficult to obtain copies of consultation records or when records are inadequate, the chances of obtaining recovery decrease. Conversely, if digital evidence is well managed, disputes can be resolved more quickly and proportionally. Therefore, a normative analysis mapping the relationship between telemedicine, misdiagnosis, and compensation is relevant to ensure that compensation for losses proceeds through procedures that are understandable, accessible, and in accordance with the principles of justice.

This study aims to compile a normative legal analysis of compensation mechanisms for victims of misdiagnosis through telemedicine by mapping the basis of obligations, forms of liability, and available

avenues for redress in Indonesian positive law, while also formulating a theoretical reading of the relationship between consent to treatment, professional standards of care, and medical record administration as the basis for evidence. Its theoretical contribution is the refinement of normative categories regarding responsible subjects and negligence parameters in remote media. Its practical contribution is a framework of reasoning that can assist case assessors, health facilities, and telemedicine providers in organizing documentation and claim handling procedures so that compensation for losses is more measurable.

RESEARCH METHOD

This study uses a normative juridical method with a qualitative literature review design to assess the construction of norms, principles, and rules governing telemedicine, professional responsibility, medical records, and data protection, then translates them into an argument regarding compensation for victims of misdiagnosis. Primary legal materials are treated as the main object of interpretation, while secondary legal materials in the form of books and scientific articles are used to build a theoretical foundation on patient safety, biomedical ethics, and theories of responsibility and evidence in health services. The synthesis process is carried out through a thematic synthesis approach to group norms and scientific ideas into coherent analytical themes. The thematic synthesis procedure follows the principle that findings from various sources can be coded, grouped, and then arranged into themes that explain the relationship between concepts argumentatively (Thomas & Harden, 2008). To organize the reporting of literature searches and selection, this study adopted the principle of reporting transparency that is common in systematic reviews so that readers can assess the coverage of sources and the selection decision trail (Moher et al., 2009).

The literature search strategy was conducted through academic databases and publisher catalogues for books. The inclusion criteria for scientific sources included: journal articles or academic books, relevance to thematic synthesis methods, patient quality or safety studies, and discourse on professional responsibility and compensation for damages; and having a verifiable DOI or ISBN. Exclusion criteria included: opinion articles without peer review, sources without clear publisher identification, sources without verifiable DOI/ISBN, and sources that only discussed telemedicine from a technical perspective without relevance to responsibility or compensation for damages. The principle of literature screening follows the logic of systematic reviews in social and health sciences, namely clarifying the research question, establishing selection criteria, and documenting the selection process so that the synthesis results can be traced (Petticrew & Roberts, 2006). For Indonesian primary legal materials, the inclusion criteria emphasized validity and direct relevance to telemedicine, medical records, data protection, medical practice, health workers, clinics, patient safety, and electronic systems regimes.

Coding was carried out in two rounds. The first round involved descriptive coding to mark units of norms and units of ideas, for example: the obligation to obtain consent, standards of care, the obligation to refer, the obligation to record, patient access to data, confidentiality, civil liability, and professional disciplinary channels. The second round involved analytical coding to examine the relationships between codes, such as the relationship between the completeness of medical records and the burden of proof, or the relationship between breaches of the duty to inform and the basis for compensation. The final themes were compiled by consolidating the codes into normative propositions that could answer the research questions. Quality assurance was carried out in three steps: (1) re-examining the suitability of the themes to the original sources to avoid any deviation in meaning, as recommended in thematic synthesis; (2) auditing the selection and coding decision trail with a source-theme matrix; and (3) reporting literature selection with a flow consistent with PRISMA principles to ensure process traceability (Thomas & Harden, 2008; Moher et al., 2009). With this design, the research output is expected to be a map of norms and arguments that is orderly and can be re-tested by readers using the same sources.

RESULT AND DISCUSSION

Normative Construction of Compensation Mechanisms for Diagnostic Errors in Telemedicine Services

Telemedicine presents both opportunities and new challenges in the construction of legal liability for misdiagnosis. The normative construction of compensation mechanisms for victims of misdiagnosis through telemedicine in Indonesian positive law needs to be read through three main dimensions, namely the professional responsibility of health workers, the responsibility of telemedicine service providers, and the rights of patients as

protected legal subjects. Telemedicine, as regulated in Minister of Health Regulation No. 20 of 2019 concerning the Implementation of Telemedicine Services between Health Service Facilities, allows for the exchange of medical information, diagnostic support, and clinical referrals between facilities using information technology. However, this normative recognition simultaneously alters the pattern of risk and proof when diagnostic errors occur, as clinical decisions are formed through data received remotely, transmission quality, and coordination procedures between facilities. This principle of caution regarding privacy is also an important standard in specific telemedicine services such as telepsychiatry and online mental health (Isnani et al., 2024). There is a significant risk that personal health information will not be adequately protected, as well as the risk that the data will not be transmitted or stored securely (Kmucha, 2020). The Minister of Health Regulation builds on the basic assumption that telemedicine services remain health services subject to service and professional standards, so that misdiagnosis cannot be treated as a purely technical event. At the compensation mechanism level, Ministerial Regulation 20/2019 requires documentation of obligations, traceability of the consultation process, and referral management between facilities. If a misdiagnosis causes harm, the documented telemedicine flow becomes the initial basis for assessing who made the decision, who gave the recommendation, and whether clinical communication took place appropriately. Thus, Minister of Health Regulation No. 20/2019 opens the door to a multi-layered analysis of responsibility, rather than eliminating the responsibilities that already exist in the regime of medical practice and the operation of health care facilities. This framework emphasizes that telemedicine compensation must be interpreted as a multi-layered responsibility that protects patients.

The dimension of professional responsibility remains the main foundation for assessing compensation for telemedicine diagnostic errors. From the dimension of professional responsibility, Law No. 29 of 2004 concerning Medical Practice emphasizes that medical practice is inherent in competence, authority, and compliance with professional standards and standard operating procedures. When doctors provide clinical assessments through telemedicine, the professional relationship remains present because there are medical actions in the form of opinions, recommendations, or clinical decisions that affect patient therapy. The compensation mechanism in this dimension stems from an assessment of whether the doctor has worked in accordance with professional standards and appropriate procedures for remote services, including recognizing the limits of available data and determining when a face-to-face referral is necessary. Law 29/2004 provides a disciplinary accountability pathway through medical professional disciplinary mechanisms, which are normatively important as a gateway for assessing professional standards when disputes arise. Although disciplinary channels are not synonymous with compensation, findings of disciplinary violations can strengthen the victim's position in filing compensation claims through civil channels. In addition, Law 29/2004 contains obligations to create and maintain medical records, so that failure to adequately document the telemedicine process can be an indicator of negligence. In disputes over misdiagnosis, medical records are a tool for testing whether the anamnesis, comparative diagnosis considerations, and reasons for referral have been recorded. Electronic medical records have a comprehensive legal dimension and are a critical element in health law (Kholis et al., 2023). If records are absent or inadequate, the burden of proof may shift to a negative assessment of professional diligence, ultimately strengthening the basis for compensation claims. Within this framework, medical records and professional standards become key points of evidence in telemedicine compensation cases.

The scope of healthcare professionals' responsibilities expands the scope of compensation because telemedicine involves various professions in the service chain. Law No. 36 of 2014 on Healthcare Professionals expands the framework of professional responsibility because telemedicine often involves more than just doctors, such as nurses, midwives, pharmacists, and other healthcare professionals in the service chain. This law emphasizes the obligation of health workers to work according to their competence and authority, as well as to comply with professional standards, service standards, and standard operating procedures. Similar legal standards have also been developed in specific areas, such as tele-rehabilitation physiotherapy services, which regulate authority, consent, and medical records (Widodo et al., 2024). Providing information about diagnoses, treatments, and clinical trials, as well as obtaining informed consent from patients, is an important part of the daily work of healthcare workers (Håkansson et al., 2019). In telemedicine, misdiagnosis can originate from the digital triage

stage, the collection of vital data, or the delivery of inaccurate clinical information.

Normatively, Law 36/2014 requires that all healthcare professionals do not exceed their authority and ensure that the information conveyed to clinical decision-makers is accurate, complete, and relevant. The consequence for the compensation mechanism is the reading of the chain of events: who did what, at what stage the information changed, and whether the change was a justifiable error. This law also recognizes guidance and supervision as well as administrative and disciplinary sanctions in accordance with professional regulations, which can run concurrently with compensation claims. In cases of telemedicine between facilities, health workers at both the sending and receiving facilities may be subject to evaluation, as diagnostic errors can arise from data collection errors at the initial facility or interpretation errors at the referral facility. Clinical practice guidelines and professional resources need to be updated to include guidance on the use of telemedicine services (Thomas et al., 2020). An orderly compensation mechanism requires the determination of liability based on authority and actual actions, not just formal positions, so that Law 36/2014 becomes a normative reference for mapping personal and institutional responsibilities. With this framework, telemedicine compensation can be directed towards a concrete and proportional evaluation of the chain of responsibility.

The patient's right to informed consent remains a fundamental requirement even when healthcare services are provided digitally. The obligation of informed consent is a key point that links professional responsibility with patient rights, and it does not disappear because the service is provided through digital means. Informed consent in healthcare is based on professional ethics, ensuring that patients understand the purpose, risks, and alternatives of services before making a decision (Pallocci et al., 2023). Normatively, valid consent requires the provision of adequate, understandable information prior to any material clinical action or decision. The informed consent process begins with information and ends with consent (Rawlings et al., 2020). The quality of service, which greatly influences patient satisfaction, also depends on clear and accurate communication of information, especially in public health services (Darmawan et al., 2022; Khayru & Issalillah, 2022).

In telemedicine, the information that must be conveyed includes the limitations of direct physical examination, the possibility of the need for supporting examinations at other facilities, the potential for misjudgment due to data or transmission quality, and the patient's option to choose face-to-face services if necessary. If this information is not conveyed, consent may be considered flawed and have legal consequences in terms of liability. This relationship is reinforced by Law No. 36 of 2009 on Health, which recognizes patients' rights to information and to safe and quality services. Failure to provide adequate information may be classified as a breach of legal obligations, which in civil proceedings may be used to establish a case for unlawful acts.

In the compensation mechanism, consent defects broaden the spectrum of losses that can be claimed, as losses are no longer solely the result of misdiagnosis, but rather the result of patient decisions shaped by incomplete information. The dynamics of online medical information searches, including digital capacity gaps and misinformation, can also influence patient understanding and the consent process (Issalillah & Khayru, 2024). In telemedicine, proof of consent and information content often relies on conversation recordings, electronic forms, or consent traces in applications. Therefore, service design and documentation governance are part of professional obligations, because without orderly documentation, fulfilment of informed consent is difficult to prove and the risk of liability increases. Within this framework, digital informed consent becomes a key instrument for patient protection as well as the basis for compensation.

The responsibilities of telemedicine providers include institutional dimensions that cannot be separated from the obligations of facilities. The dimension of responsibility of telemedicine service providers must be distinguished between health care facilities and electronic system providers that provide platforms or infrastructure. For facilities, administrative obligations and service standards form the normative basis. Minister of Health Regulation No. 9 of 2014 concerning Clinics, together with the applicable health care facility licensing regime, requires operational permits, fulfilment of infrastructure requirements, and service quality management. If telemedicine is provided by a clinic or connected to clinic services, then quality obligations, referral processes, and managerial responsibility for healthcare personnel become relevant in compensation assessments. The compensation mechanism can be directed at the facility as the party responsible for providing the service, especially in cases of misdiagnosis related

to unreasonable workloads, lack of triage procedures, or failure of the internal referral system.

In the area of patient safety, Minister of Health Regulation No. 11 of 2017 concerning Hospital Patient Safety outlines systemic obligations to reduce incidents that harm patients, including reporting, learning, and improvement. Although this regulation is directed at hospitals, its principles affect the standards of propriety of facilities when telemedicine involves hospitals as recipients of consultations or providers of clinical recommendations. If a hospital does not implement proper patient safety governance, and this contributes to misdiagnosis, administrative sanctions may be imposed, and compensation claims may be addressed to the hospital through the principle of institutional responsibility for the services it provides. Within this framework, health facilities remain institutionally responsible for the quality and safety of telemedicine services.

The dimension of platform responsibility emphasises that electronic systems are not merely tools, but legal entities. Platform or electronic system operators are subject to the regime of Law No. 11 of 2008 concerning Electronic Information and Transactions as amended by Law No. 19 of 2016, as well as Government Regulation No. 71 of 2019 concerning the Implementation of Electronic Systems and Transactions, establishes the obligation of electronic system operators to implement reliable and secure systems and to be responsible for the operation of their systems. In telemedicine, "reliable and secure" should be interpreted as the availability of features that maintain the integrity of clinical data, prevent unauthorised changes, maintain service availability during service hours, and provide auditable logging in the event of a dispute. If a misdiagnosis arises due to system failure, for example, patient complaint data is not fully transmitted, images are compressed without notification, thereby reducing clinical quality, or downtime occurs, causing delays in referrals, then responsibility may shift to the electronic system operator. PP 71/2019 adds a governance framework, including the obligation to protect personal data in electronic systems in accordance with the provisions of laws and regulations. In the compensation mechanism, this allows victims or facilities to link losses to violations of system management obligations, then file claims for compensation based on the causal relationship between system failure and incorrect clinical decisions. This interpretation positions the platform not merely as an intermediary, but as a legal entity that can be held accountable when its failure becomes a legally relevant cause. With this framework, telemedicine platforms are positioned as parties that are obliged to guarantee the reliability and security of their services.

The consumer protection dimension positions telemedicine patients as legal entities entitled to service compensation. Law No. 8 of 1999 on Consumer Protection emphasises the dimension of compensation by treating telemedicine service users as service consumers, while service providers, including platforms offering services, are categorized as business actors. Article 19 of the Consumer Protection Law stipulates the obligation of business actors to provide compensation for consumer losses resulting from the use of goods or services produced or traded. In telemedicine, this clause means that if telemedicine services are marketed as a safe and reliable means of consultation, but in fact losses occur due to service defects, consumers can claim compensation. "Service defects" in telemedicine can include failure to maintain service continuity, failure to secure accounts resulting in unauthorized access that alters complaint data, or misleading interface design that causes patients to fill in important information incorrectly.

The Consumer Protection Law also prohibits certain standard clauses that are detrimental to consumers. This is relevant because platforms often use terms and conditions that attempt to broadly limit liability. Normatively, restrictions that negate the liability of business actors for consumer losses can be considered contrary to the principle of consumer protection. In terms of compensation mechanisms, this law provides a relatively direct claim pathway, including the possibility of dispute resolution through the Consumer Dispute Settlement Agency, where relevant. However, because telemedicine concerns health services, the relationship between the Consumer Protection Law and the health regime must be read systematically so that compensation claims are in line with professional standards and service standards. Within this framework, consumer protection strengthens the telemedicine compensation pathway to remain in line with health standards.

The dimension of personal data protection emphasizes that telemedicine compensation also includes the right to patient privacy. The regulation of health data as sensitive data is confirmed by Law No. 27 of 2022 concerning Personal Data Protection. In telemedicine, data on diagnoses, symptoms, medical history, clinical photographs, and supporting examination results are personal data that require a legitimate basis for processing,

purpose limitation, and security guarantees. The PDP Law establishes the roles of data controllers and data processors, which in telemedicine services may be attached to health facilities, platform providers, or third-party cloud computing providers, depending on contractual arrangements and factual control over data processing. If a misdiagnosis occurs due to data leaks that alter clinical information, data manipulation by unauthorized parties, or failure to maintain the integrity of consultation records, then the issue of compensation is no longer solely about medical damages, but rather redress for violations of privacy and data security rights.

The PDP Law provides for certain administrative and criminal consequences, as well as opening up the possibility of compensation claims. This means that victims can seek compensation for material losses, such as medical expenses incurred as a result of incorrect clinical decisions, and immaterial losses in the form of suffering caused by the violation of health data confidentiality. For organizers, the PDP Law requires the implementation of adequate technical and organizational measures, including access control, encryption, and incident management. The legal implications and challenges of using medical records as evidence in the Indonesian judicial system also affect the effectiveness of this compensation mechanism (Ustani et al., 2024). Within the framework of the compensation mechanism, compliance with the PDP Law can be used as a parameter of propriety. Non-compliance can strengthen the argument of negligence, especially if it can be shown that data security breaches are a reasonable cause for misdiagnosis or delayed treatment. Within this framework, telemedicine compensation must be interpreted as compensation for medical losses as well as privacy violations.

Patient rights are a crucial dimension that ensures telemedicine remains subject to service quality and safety standards. Patient rights as a third dimension have a strong normative basis in Law No. 36 of 2009 on Health, which affirms the right to safe, quality, and affordable health services, as well as the right to obtain information about one's health condition and the actions to be taken. In the realm of telemedicine, these rights demand that remote services do not lower quality and safety standards, but rather adapt them through procedures capable of managing the limitations of the medium. If the quality-of-service declines, for example, because there is no referral protocol when symptoms indicate an emergency, then the violation of patient rights can form the basis for a compensation claim. At this point, compensation mechanisms are understood as a means of redress when patients' rights are violated, whether through administrative, disciplinary, or civil channels. Patients have the right to request explanations, access to service records, and fair dispute resolution.

Normatively, patient rights are also related to the obligation of service providers to keep health data confidential, which is then reinforced by the PDP Law and medical record regulations. Thus, the Health Law provides a general framework, and technical regulations translate this into concrete obligations. In inter-facility telemedicine, patients often do not interact directly with all the health workers involved. Therefore, patients' rights require clarification regarding who is responsible for the service that should be contacted, who is obliged to provide explanations, and how patients can exercise their rights to request corrections or referrals. This clarity determines whether compensation can be sought in an orderly manner, or whether it is hampered by the shifting of responsibility between actors. With this framework, patient rights become the foundation for telemedicine compensation, which demands clarity of service responsibility.

The civil route through Article 1365 of the Civil Code provides flexibility in linking responsibility for telemedicine misdiagnosis. In civil proceedings, Article 1365 of the Civil Code on unlawful acts is the general basis for claiming compensation when there are an unlawful act, error, loss, and causal relationship. Diagnostic errors through telemedicine can be classified as unlawful acts if it is proven that there has been negligence in meeting professional standards, service standards, or electronic system management obligations. Damages may include costs of further treatment, loss of income, or psychological suffering.

Causal relationships in telemedicine must be established based on a documented sequence of events: what data was received, what questions were asked, what decisions were made, and what actions were taken after the consultation. In practice, the defendants may include healthcare professionals, healthcare facilities, platform operators, or several parties at once, depending on each party's contribution to the error and loss. Article 1365 provides scope for assessing "fault" broadly, including negligence in regulating work systems, training, or data security. The compensation mechanism through civil proceedings allows judges to assess the number of damages proportionally, including immaterial

losses, by considering the degree of negligence and the consequences that arise. In telemedicine, this approach is important because diagnostic errors often arise from a combination of human and technological factors. Article 1365 provides flexibility to link liability to the party that actually created the risk and normatively had an obligation to prevent it. However, this flexibility requires orderly evidence, making the quality of medical records and digital traces key determinants in establishing causality and the extent of error. Within this framework, Article 1365 serves as a civil instrument that balances human and technological factors in telemedicine compensation.

The criminal dimension establishes the outer limits of telemedicine liability when negligence leads to serious consequences. Criminal proceedings are a different instrument from compensation, but remain relevant to understanding the normative construction as they can run concurrently with civil suits. Article 359 of the Criminal Code stipulates that anyone whose negligence causes the death of another person is punishable by law. In the realm of telemedicine, the application of this norm requires caution because criminal law requires stricter proof of fault and assesses negligence to a certain degree. Diagnostic errors that result in death or serious injury can trigger a criminal investigation if there is clear negligence, such as ignoring warning signs that should have prompted immediate referral, or providing therapy that clearly contradicts clinical standards. Although criminal sanctions are not designed as a compensation mechanism, criminal proceedings may result in restitution or reimbursement of costs in certain practices, as well as exerting normative pressure on service providers to establish prevention systems.

In the normative construction of compensation mechanisms, the criminal dimension serves as an outer limit that marks telemedicine as not being a space free of responsibility. The existence of criminal penalties encourages higher standards of caution, especially in emergency situations. However, the separation of functions remains important: compensation aims to restore victims, while criminal law aims to uphold public norms and provide a deterrent effect. Therefore, a neat framework will place criminal proceedings as an option when the consequences and degree of negligence meet the elements, without making it the only way for victims to obtain compensation for their losses. With this framework, the criminal route serves as a reminder that telemedicine remains subject to public norms.

The administrative dimension emphasizes that telemedicine compensation also depends on the facility's compliance with service governance. In the administrative dimension, misdiagnosis through telemedicine can be understood as a failure to fulfil the obligation to provide services in accordance with the standards set by health regulations. Healthcare facilities are required to provide services in accordance with their licenses and standards, including human resource management, referral procedures, and quality control. When telemedicine is conducted between facilities as regulated by Permenkes 20/2019, administrative governance must ensure that the sending and receiving facilities have the authority, readiness, and clear coordination channels. Administrative failures, such as the absence of patient identity verification procedures, no escalation system for emergency cases, or no person responsible for telemedicine services, can cause losses that then require compensation. Administrative sanctions such as warnings, guidance, service suspension, or license revocation can be imposed by health authorities in accordance with the facility supervision regime. Although administrative sanctions are not compensation, they establish a normative basis that the service has deviated from its public obligations, which can strengthen compensation claims in civil or consumer courts. In addition, administrative mechanisms can facilitate dispute resolution through complaints and clarifications at the facility or health service level, which is often the first step before litigation. In telemedicine, the administrative route is important because it can immediately order process improvements and prevent repeated losses. For victims, this route can result in acknowledgement of errors, access to documents, and recommendations for further referrals, all of which are relevant to recovery. Therefore, a well-structured compensation system places administrative sanctions and service improvements as part of the recovery ecosystem, although not as a substitute for compensation. With this framework, the administrative channel serves as a corrective instrument that complements telemedicine compensation.

Medical records serve as a bridge of evidence that unites all dimensions of responsibility in telemedicine. Medical records and evidence are the bridge that unites the three dimensions, because compensation depends on the ability to assess what happened and who is responsible. Minister of Health Regulation No. 24 of 2022 concerning Medical Records emphasizes the obligation to record, store and manage medical records,

including in electronic form.

In telemedicine, medical records must contain identity, medical history, assessment results, follow-up plans, referral instructions, and important communications that influence clinical decisions. The implementation of electronic medical record systems in the era of digital transformation requires an appropriate change management strategy, as case studies in hospitals show (Nurmaidah et al., 2024). The orderliness of medical records determines whether diagnostic errors can be objectively tested and whether patients can access the information needed to assess losses and recovery pathways. Permenkes 24/2022 provides a basis for patients to obtain summaries or copies in accordance with the provisions, while also requiring facilities to maintain confidentiality and security. This obligation is in line with the Personal Data Protection Law and Government Regulation 71/2019, which require the security of electronic systems. If telemedicine records are lost, altered, or incomplete, two consequences arise simultaneously: first, the assessment of service quality becomes weak; second, the evidence in disputes becomes uneven and detrimental to the victim. In the context of compensation, this can be interpreted as administrative negligence and professional negligence, as record-keeping is part of service standards. In addition, orderly records enable the tracing of each party's contribution, for example, whether the recommendation came from a specialist doctor at the receiving facility or from a health worker at the sending facility. Because telemedicine is often collaborative, medical records become a tool to avoid blurring of responsibility, so that the burden of compensation can be shared proportionally. With this framework, medical records become a key instrument to ensure that telemedicine compensation is fair and proportional.

The framework of responsibility in healthcare requires a balanced analysis between actors and systems. Ultimately, the relationship between professional responsibility, organizational responsibility, and patient rights necessitates a normative construct that assesses the proportional contribution of each party, especially when misdiagnosis arises from a combination of human and technological factors. On one end, if misdiagnosis stems from clinical reasoning that deviates from standards, or failure to recognize clear warning signs, then the burden of responsibility tends to lie with healthcare personnel, with the possibility of the facility being involved as the party responsible for service provision. At the other end, if the misdiagnosis is rooted in the failure of an electronic system that alters, omits, or delays important data, then the responsibility shifts to the electronic system provider and service provider, reinforced by the ITE Law, PP 71/2019, the Consumer Protection Law, and the PDP Law. Between these two extremes, there are many variations, such as when the platform interface does not facilitate the entry of certain symptoms, resulting in clinicians receiving incomplete information and making incorrect decisions. In such variations, a fair compensation mechanism requires a reading of layered causal relationships and a tiered assessment of errors. Patient rights are the ultimate orientation, as all these regimes ultimately aim to protect safety, dignity, and compensation for losses. By combining Minister of Health Regulation 20/2019 as the framework for telemedicine between facilities, Law 29/2004 and Law 36/2014 as the professional framework, the Health Law as the framework for patient rights, as well as the ITE Law, PP 71/2019, the Consumer Protection Law, the PDP Law, the Minister of Health Regulation on medical records, and the Minister of Health Regulation on patient safety as the implementation framework, a normative compensation structure can be developed as a system capable of assessing actions, determining responsibility, and compensating victims through available legal channels. This series of regulations demonstrates that justice for patients can only be achieved through a consistent legal system.

Evidence and Forms of Compensation for Victims of Misdiagnosis in Telemedicine Services

The aspects of evidence and compensation for losses in telemedicine require a structured legal framework. The standard of proof and form of compensation for victims of misdiagnosis through telemedicine can be derived normatively from three interlocking principles, namely consent to medical treatment, medical records as legal documents, and protection of patients' personal data. Telemedicine as a technology-based service shortens the distance of service, but lengthens the chain of facts that must be assessed when a dispute arises: who provided the information, how consent was formed, what data was received by clinicians, how the data was stored, and what follow-up steps were taken. The positive legal framework directs that evidence does not stand on unilateral acknowledgement, but on a trail of decisions and data. Therefore, the standard of proof in telemedicine should be established through a combination of documentary evidence, electronic evidence, and assessments of healthcare

service standards as defined in professional and administrative regulations.

At the same time, the form of compensation for losses must be understood as compensation that is proportional to material and immaterial losses, accompanied by the restoration of patients' rights to corrective services and data security, as well as the imposition of relevant sanctions on violators. With this approach, telemedicine is not treated as a special area that is immune from accountability, but rather as a variation in the delivery of healthcare services that requires a more rigorous standard of proof because it is mediated by electronic systems. The norms governing consent, medical records, and personal data provide parameters for assessing the legality of actions, professional diligence, information integrity, and the truth of the causal relationship between diagnostic errors and the resulting losses. These principles collectively emphasize that telemedicine accountability must be ensured through consistent legal standards. This aligns with findings highlighting the importance of a telemedicine regulatory framework to enhance patient protection and safety (Sasmita et al., 2023).

Medical consent in the context of telemedicine underscores the importance of safeguarding patient rights from the outset of service provision. The principle of medical consent stems from Law No. 36 of 2009 on Health, which places patients' rights to information and consent as part of safety protection. In telemedicine, consent must be interpreted as consent to the use of remote services and their limitations, not merely consent to "consult". The standard of proof derived from this norm requires proof that adequate information has been provided before a meaningful clinical decision is made, including an explanation of the possible need for a direct examination, the need for supporting examinations, and indicators that require immediate referral. If this information is not provided, the basis for proving a violation of patient rights can stand without having to wait for proof that the diagnosis was incorrect from the outset. In other words, defective consent can be a standalone basis for proving a violation, as the patient loses the opportunity to make an informed decision.

From the norms of the Health Law, it can also be inferred that information must be conveyed in language that is understandable and appropriate to the patient's condition, including in digital services that often require concise communication. For telemedicine, relevant evidence includes electronic consent forms, agreed-upon conversation recordings, consultation summary notes, and written explanations in applications that are actually displayed to patients. A reasonable standard of proof requires more than just a tick box, as a tick box does not automatically prove that important information has been communicated and understood. This indicates that the validity of patient consent must be proven through a tangible information trail.

Professional obligations in medical practice emphasize that patient consent is not merely an administrative formality. Law No. 29 of 2004 on Medical Practice reinforces the principle of consent by placing it as a professional obligation directly related to practice standards and therapeutic relationships. From this regime, the standard of proof moves on two levels: the legality of the action and professional prudence. At the level of legality, the burden of proof is directed at the existence or absence of valid consent to the clinical action or decision taken, including the use of telemedicine as a medium for obtaining and processing medical information. At the level of diligence, the burden of proof is directed at the quality of the information provided and the appropriateness of the clinical steps taken in accordance with professional standards. The Medical Practice Act requires that practice be carried out by authorized parties, so that evidence may also include verification of the identity and authority of the medical personnel providing the assessment, especially in digital services that are vulnerable to shared accounts or identity fraud.

In addition, this law links practice with the obligation to keep records, so that valid consent should ideally be reflected in medical records. If the medical records do not contain an explanation of the risks and consent, this omission may be considered an indicator of an irregular procedure. In malpractice disputes, the pattern of evidence can be directed at the following sequence: information was provided, the patient understood, the patient consented, the clinician took steps in accordance with standards, and the clinician documented the clinical reasons. A break in any of these links weakens the defense of the service provider and strengthens the patient's claim, especially when actual harm has occurred. This chain of evidence emphasizes that the integrity of medical practice depends on the completeness of consent and documentation. This is an integral part of legal protection for patients from a legal and medical ethics perspective (Herisasono et al., 2023).

The use of electronic systems in telemedicine requires standards of proof that depend on the

reliability of digital data. Because telemedicine uses electronic systems, consent and clinical communication often take place in the form of electronic data. At this point, Law No. 11 of 2008 concerning Electronic Information and Transactions, as amended by Law No. 19 of 2016, forms the basis for assessing the validity and probative value of electronic evidence. The standard of proof derived from the ITE Law requires that electronic consent, chat conversations, call recordings, clinical photographs, and activity logs be recognized as evidence as long as they meet the principles of system reliability and information integrity. This means that if the platform or facility can demonstrate that the system consistently records the time, user identity, data changes, and access traces, then electronic evidence carries strong weight in proving what is conveyed and decided. Conversely, if the system does not provide an audit mechanism, cannot demonstrate data integrity, or allows changes to records without a trace, then the value of the evidence may be weakened and instead become an indicator of governance negligence.

The ITE Law also provides a framework that actions in electronic systems have legal consequences, so that the excuse of "only digital consultation" is not relevant to negate responsibility. For patients, this regime helps compile chronological evidence through screenshots, notification emails, chat histories, and proof of payment transactions. For providers, this regime requires readiness to submit logs and metadata when requested by authorities or courts. The measure of sound telemedicine evidence, therefore, is inherent in the system's ability to prove the authenticity, integrity, and traceability of electronic documents. This confirms that electronic evidence is the main foundation of telemedicine service accountability.

Medical documentation in telemedicine confirms the role of medical records as a legal instrument that determines accountability. The second principle, namely medical records as legal documents, takes operational form through Minister of Health Regulation No. 24 of 2022 concerning Medical Records. From this regulation, the main measure of proof for claims of misdiagnosis is derived from the completeness, timeliness, and consistency of the records. Electronic medical records in telemedicine must contain the patient's identity, main complaints, brief history, findings obtained through remote media, working diagnosis or differential diagnosis, plan, therapy, as well as follow-up instructions and referrals. In the event of a misdiagnosis, medical records serve as a roadmap for assessing whether the clinical evaluation process was conducted reasonably based on the available data and whether there were warning signs that should have triggered a referral.

Ministry of Health Regulation No. 24/2022 also emphasizes that the management of medical records is the responsibility of service providers, meaning that negligence in recording can be considered an administrative violation and may affect civil assessments. The burden of proof can be established based on discrepancies between medical records and other facts, for example, if a patient mentions certain symptoms in a chat but these are omitted from the medical records. Such discrepancies may lead to allegations of inaccurate documentation or careless assessment. For patients, medical records provide a basis for calculating damages and testing causal relationships. For providers, orderly medical records can be a defense tool that shows that steps were taken in accordance with procedures. Thus, medical records serve a dual purpose: they are a tool for patient protection and a tool for professional protection, as long as their management complies with standards. The strength of medical records lies in their ability to serve as evidence that balances the rights of patients and the obligations of healthcare professionals.

Referrals and continuity of service in telemedicine require consistent recording as a basis for evidence. Still in the realm of medical records, the measure of evidence in telemedicine requires special attention to referrals and continuity of service. Permenkes 24/2022 requires the recording of follow-up plans, so that in telemedicine, key evidence is often found in referral instructions, control schedules, and warning signs that should prompt patients to seek immediate help. Diagnostic errors often result in significant harm due to delayed correction, so evidence must assess whether the service provider has directed the patient along a safe path. If the medical record does not document warning signs, does not record the reasons for delaying referral, or does not document the results of re-evaluation after symptoms worsen, then the standard of care is questionable. From this, a corrective form of recovery can be derived, namely the obligation to provide remedial services or further referrals at a reasonable cost, especially if the delay was caused by incorrect or incomplete information from the service provider.

In dispute resolution practice, medical records also form the basis for assessing the proportion of

losses that can be attributed to specific actions. For example, if the records show that the patient was referred for immediate examination but the patient delayed without a valid reason, then the causal relationship can be considered weakened. Conversely, if the records show that no referral was made despite symptoms indicating an emergency, then the causal relationship is strengthened. Therefore, medical records are not merely evidence of "what was done", but evidence of "why the decision was made" and "what risk mitigation was provided", which determines the outcome of the compensation assessment. The regularity of referral records is key to assessing liability and the proportion of compensation fairly.

The protection of personal data in telemedicine confirms the position of health data as a sensitive legal asset. The third principle, personal data protection, is firmly grounded in Law No. 27 of 2022 on Personal Data Protection. The standard of proof derived from the PDP Law classifies health data as specific personal data, requiring lawful grounds, clear objectives, and adequate protection for its processing. In disputes over misdiagnosis through telemedicine, the PDP Law is relevant in at least two lines of evidence. First, the data integrity line, namely whether the data on which the diagnosis is based remains intact, unchanged, not mixed with other people's data, and not affected by unauthorized access. Second, the privacy loss line, namely whether there has been a leak that has caused specific losses such as fear, stigma, or socio-economic losses. If the misdiagnosis occurred due to data manipulation, account sharing, or a leak that altered clinical information, then the evidence can be directed at the data controller's failure to implement security and access management.

The PDP Law also provides a basis for demanding remedies in the form of cessation of the unlawful processing, data correction, incident notification, and proportional compensation. In telemedicine, this recovery is important because data correction can prevent further harm, such as the use of incorrect diagnoses in subsequent services. Thus, the PDP Law extends recovery from mere monetary compensation to the restoration of rights to data control and recovery for non-material losses arising from breaches of confidentiality. This framework ensures that patient data security is an integral part of telemedicine accountability.

Civil remedies in the context of telemedicine require a construction of evidence based on classical legal elements. The framework for civil compensation as the primary form of remedy can be derived from Article 1365 of the Civil Code concerning unlawful acts. The standard of proof in telemedicine in this context requires four elements: unlawful acts, fault, damage, and causation. Faulty consent can be used to prove unlawful acts in the form of violations of patients' rights to information, incomplete medical records can be used to prove negligence in the form of documentation or procedural negligence, and violations of the Personal Data Protection Law can be used to prove violations of the obligation to maintain data integrity and confidentiality.

Damages in telemedicine often have two layers, namely clinical damages due to delayed or incorrect treatment and economic damages due to additional costs, referral travel, loss of income, and rehabilitation costs. Article 1365 allows for claims for immaterial damages, which are important because patients often experience psychological distress, anxiety, or a decline in quality of life. The causal relationship must be carefully established by comparing medical records, electronic evidence from the ITE Law, and evidence of data management from the PDP Law. The forms of compensation that can be requested include reimbursement of actual costs, compensation for loss of income, compensation for suffering, and the costs of further treatment that are reasonably necessary as a result of misdiagnosis. In telemedicine disputes, court requests for the submission of system logs or access records can be important to close gaps in evidence, thereby maintaining a balance of evidence between patients and providers. This framework shows that civil damages are the main instrument for maintaining a balance of rights and obligations. The discourse on legal protection for patients in cases of medical negligence (Lethy et al., 2023) provides relevant context to the importance of this avenue of redress.

The criminal aspect of telemedicine highlights the legal consequences that arise from gross negligence. The criminal dimension related to negligence, particularly Article 359 of the Criminal Code, establishes different parameters of proof from civil law, as it requires proof of fault with stricter standards and serious consequences. In telemedicine, this norm is relevant when negligence in remote assessment or neglect of referral obligations results in death. Criminal standards of proof require a detailed description of the duty of care that was breached, the perpetrator's ability to act otherwise, and the connection between the act and the consequences.

Medical records from Permenkes 24/2022 and

electronic evidence from the ITE Law are important tools for reconstructing decisions, response times, and communications that occurred. However, recovery for victims through criminal proceedings is not synonymous with compensation, as the primary purpose of criminal proceedings is to enforce public norms. Nevertheless, a normative understanding of criminal proceedings is useful for assessing the "degree of fault" that may affect the amount of compensation in civil proceedings, especially when negligence is deemed severe. From a telemedicine governance perspective, the threat of Article 359 demands strict protocols to recognize critical symptoms and prevent delays in treatment. For victims, criminal proceedings can provide recognition of fault and certainty of assessment of negligence, although financial recovery is still more appropriately pursued through civil proceedings or other available compensation mechanisms. Thus, criminal parameters serve as a normative fence against gross negligence in remote services. This confirms that criminal proceedings act as a control mechanism for fatal negligence.

The administrative dimension of telemedicine emphasizes the importance of facilities' compliance with established procedures. Compensation for losses can also be derived from the administrative regime governing health service facilities, as telemedicine is still conducted through licensed facility structures. Minister of Health Regulation No. 20 of 2019 concerning the Implementation of Telemedicine Services between Health Service Facilities provides a framework that telemedicine between facilities requires the regulation of service flows, record-keeping, and the responsibilities of the sending and receiving facilities. When a misdiagnosis occurs, administrative evidence can be directed at the fulfilment of procedural obligations: whether the facility has a teleconsultation procedure, whether a person in charge has been appointed, whether the referral process is carried out in accordance with the provisions, and whether the teleconsultation documentation is integrated into the medical records.

Minister of Health Regulation No. 9 of 2014 concerning Clinics is relevant when telemedicine services involve clinics as providers, as it stipulates licensing requirements, service governance, and quality obligations. If an administrative violation is proven, administrative sanctions may be imposed by the competent authority. From a recovery perspective, administrative sanctions themselves are not compensation, but they can serve as a strong basis for assessing violations of public obligations that should prevent patient harm. Furthermore, administrative recovery can take the form of orders to improve services, obligations to provide clarification, and obligations to disclose certain documents in accordance with regulations, all of which help victims obtain evidence for civil proceedings. In telemedicine, swift administrative recovery can prevent further damage, especially when diagnostic errors are related to data that is still stored and can be corrected immediately. This shows that the administrative route serves as a corrective mechanism that complements civil recovery. This aspect of healthcare facility accountability is also evident in discussions about palliative care, which highlight the importance of clear operational standards for accountability (Wahyusetiawan et al., 2024).

The consumer pathway in telemedicine opens up a space for recovery that focuses on the relationship between services and users. Outside of civil and criminal pathways, recovery of losses can be carried out through consumer dispute resolution supported by Law No. 8 of 1999 concerning Consumer Protection. Telemedicine provided through applications and accompanied by service payments fulfils the characteristics of a business-consumer relationship, so that the standards of service and information provided can be tested against consumer protection norms. The burden of proof in this channel rests on the existence of losses resulting from the services received and the existence of misinformation, such as promotions that create excessive confidence in the capabilities of remote diagnosis, or statements that downplay the need for direct examination.

The Consumer Protection Law places compensation as an obligation on business actors when consumers suffer losses, so that the form of recovery can be in the form of refunds, replacement of services, certain treatment costs, or other agreed compensation. This law also provides for resolution through the Consumer Dispute Resolution Agency, which is designed to be simpler than court proceedings. For telemedicine, this route can be effective for losses that are measurable and can be strongly proven through transaction evidence, chat history, and consultation summaries. However, because telemedicine involves medical aspects, the standard of proof often still requires an explanation of service standards. Therefore, the consumer route is strongest when the loss is related to the quality of the service as a digital service, unclear information, or system failures that cause the service to not comply with the agreement, while clinical

assessment aspects can still be positioned as part of the quality of service promised to users. This framework emphasizes that consumer protection is an important instrument for maintaining fairness in telemedicine services. User acceptance and response, including that of Generation Z, to telemedicine services is an important factor in building trust and testing the effectiveness of this service model (Issalillah & Khayru, 2023).

Telemedicine accountability requires a systematic and layered framework for proving causality. The principle of accountability requires a measure of proof of causality that balances the interests of patients and the defense of healthcare professionals and service providers. In telemedicine, causality is often debated because there are patient factors, technological factors, and follow-up service factors beyond the initial consultation. Normative measures of proof can be structured in tiers. The first stage is accurate chronological proof through electronic evidence in accordance with the Electronic Information and Transactions Law and medical records in accordance with Minister of Health Regulation No. 24/2022. The second stage is proof of the quality of consent and information in accordance with the Health Law and the Medical Practice Law. The third stage is proof of data integrity and security in accordance with the Personal Data Protection Law, especially if there are allegations of data alteration, exchange, or leakage. The fourth stage is proving the loss with evidence of costs, evidence of lost income, and evidence of further medical conditions. The fifth stage is establishing a reasonable cause and effect link: whether the misdiagnosis rationally caused a delay in treatment, incorrect treatment, or a detrimental decision by the patient. In this pattern, the defense of healthcare personnel can be built by showing that adequate information was provided, complete service records, and clinical decisions proportional to the available data. The defense of the system operator can be built by showing a reliable system, consistent logs, and no security breaches. However, when evidence shows information defects, poor records, or data breaches, the burden of argument tends to shift to the operator to explain why the patient must still bear the loss. This standard of proof maintains fairness by placing the party in control of the system and documents under an obligation to explain the regularity of the process. This tiered framework ensures that causality is assessed fairly for both patients and service providers.

The design of telemedicine recovery requires a comprehensive approach that adapts to the type of violation that has occurred. The form of loss recovery in telemedicine can be formulated as a recovery package that follows the type of violation: financial recovery, health service recovery, data recovery, and procedural justice recovery. Financial recovery is rooted in Article 1365 of the Civil Code and may include additional medical expenses, medical rehabilitation costs, referral transport costs, loss of income, and compensation for suffering. Health service recovery can be derived from the principle of the right to safe and quality services in the Health Law, in the form of an obligation to provide corrective services, appropriate referrals, or follow-up examinations at no additional cost if, normatively, the error originated from the service provider. Data recovery is derived from the Personal Data Protection Law, in the form of data correction, deletion of data processed without a legal basis, access restrictions, and notification of incidents in the event of a security breach.

Procedural justice recovery includes patient access to medical record summaries in accordance with Minister of Health Regulation 24/2022, access to transaction and communication records in accordance with the Electronic Information and Transactions Law, and the opportunity to use fair dispute resolution channels through the courts, mediation, or the Consumer Protection Agency in accordance with the Consumer Protection Law. In this type of restoration plan, compensation does not stop at money, because telemedicine is highly dependent on data and service continuity. Restoration that closes data access or does not correct data actually opens up the risk of repeated losses. Therefore, effective recovery must bind service providers to the obligation to correct records, improve referrals, and enhance system security, ensuring patients receive tangible recovery benefits in subsequent healthcare services. This framework ensures telemedicine recovery is not merely compensatory but also corrective and preventive.

Analytical conclusions regarding telemedicine require an integrated framework for proof and recovery. As an analytical conclusion to this stage, the measures of proof and forms of recovery in telemedicine can be systematically arranged without repeating the responsibility framework of the previous stage, emphasizing that consent proves the legality and validity of information, medical records prove the clinical process and orderliness of documentation, while data protection proves the integrity and confidentiality of information that forms the basis of diagnosis. The

Health Law and Medical Practice Law provide parameters for consent and information obligations, the ITE Law confirms the recognition of electronic evidence and requires system integrity, Minister of Health Regulation 24/2022 places medical records at the center of evidence, and the PDP Law enforces specific health data control obligations.

The recovery process then follows the nature of the violation: civil through Article 1365 of the Civil Code for compensation, criminal through Article 359 of the Criminal Code for negligence with fatal consequences, administrative through compliance with permits and service standards based on the Minister of Health's regulation on telemedicine and clinic regulations, and consumer through the Consumer Protection Law and BPSK for service disputes. With this structure, telemedicine is treated as a health service that must be auditable, not a regular communication service. The burden of proof requires traceability, while recovery requires proportionality and the ability to prevent further losses. If this framework is implemented consistently, legal certainty for patients and providers will increase because the chain of evidence and recovery can be predicted, tested, and accounted for. This series of analyses confirms that telemedicine can only function fairly if the legal framework is implemented consistently.

CONCLUSION

The compensation mechanism for victims of misdiagnosis through telemedicine can be derived from a set of binding norms governing consent to treatment, medical record keeping, and health data security, and then implemented through disciplinary, administrative, civil, consumer, and criminal channels according to the nature of the act and its consequences. Valid consent confirms the legality and quality of information before clinical decisions are made. Electronic medical records set the standard of proof regarding what is assessed, decided, and followed up on. Personal data protection strengthens the proof of the integrity of information used for diagnosis and provides a basis for recovery when data breaches cause losses. Ultimately, orderly measures of proof lead to a proportional division of responsibility and clarify the form of recovery that is appropriate for patients.

The normative framework emphasizes that telemedicine requires stricter documentation and system security because most disputed facts take the form of electronic evidence. Consequently, facilities and platform providers must ensure reliable audit trails, lawful data retention, and patient access to service summaries in accordance with regulations, so that the evidence process is balanced. For healthcare professionals, the implication is a requirement for clinical reasoning that can be traced through differential diagnosis records, referral reasons, and risk explanations provided. For patients, this framework clarifies that compensation for losses may include material and immaterial damages, appropriate corrective services, data corrections, and administrative actions that improve service governance.

It is necessary to develop binding telemedicine operational guidelines at the facility level to ensure standards for electronic consent, clinical recording structures, and referral governance, so that evidence is not based on diverse practices. Facilities and platforms need to organize policies for patient access to service records, including request mechanisms, response times, and secure output formats. Data security audits and service resilience tests need to be part of routine compliance, accompanied by incident handling procedures that ensure rapid notification and data correction. In dispute resolution, mediation should be prioritized for measurable losses while ensuring the disclosure of key documents so that the outcome is fair.

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