

The Evidentiary Strength of Electronic Medical Agreements as Evidence in Civil Disputes in Indonesia

Muhammad Syaukani¹, Yulies Tiena Masriani²

¹Institut Teknologi Bisnis dan Bahasa Dian Cipta Cendikia Bandar Lampung, Indonesia

²Magister Kenotariatan, Universitas 17 Agustus 1945 Semarang, Indonesia

Email: mbsyaukani@gmail.com¹, yuliestienam@gmail.com²

*Author Correspondence: mbsyaukani@gmail.com

DOI: <https://doi.org/10.55299/jsh.v5i1.2123>

Article history: Received September 02, 2026: Revised September 22, 2026: Accepted September 29, 2026

ABSTRACT

The digitalization of healthcare services has encouraged the use of electronic medical agreements, particularly electronic informed consent, raising legal issues concerning their evidentiary strength in civil disputes between patients and healthcare professionals and/or hospitals. This study aims to analyze the evidentiary strength of electronic medical agreements as private deeds in resolving civil disputes in Indonesia. This study employs a normative legal research method using statutory and conceptual approaches. Legal materials were collected through library research and analyzed qualitatively using deductive reasoning. The findings show that electronic medical agreements constitute electronic documents that may be used as lawful evidence. However, because they are created without the involvement of an authorized public official, their evidentiary status is comparable to that of private deeds and cannot be equated with authentic deeds. Their evidentiary strength depends on the parties' acknowledgment and the ability to establish the identity of the consenting party, document authenticity, validity of electronic signatures or authentication mechanisms, data integrity, reliability of the electronic system, and the availability of an audit trail. Where the document is disputed or denied, it should be supported by relevant electronic and other evidence. The final assessment of its evidentiary value remains within the judge's authority based on the overall facts and evidence presented during the proceedings.

Keywords: Civil Dispute; Electronic Evidence; Electronic Medical Agreement; Evidentiary Strength; Private Deed

INTRODUCTION

Digital transformation has brought fundamental changes to the provision of healthcare services in Indonesia. Digitalization is no longer limited to the use of technology for hospital administration but has expanded into medical service processes that directly establish and document legal relationships among patients, healthcare professionals, and healthcare facilities. One manifestation of this development is the use of electronic medical records and electronic informed consent. This development has obtained a regulatory basis through the Regulation of the Minister of Health Number 24 of 2022 concerning Medical Records, which positions the implementation of electronic medical records as an important part of the digital transformation of healthcare services in Indonesia (Ministry of Health of the Republic of Indonesia, 2022).

In healthcare relationships, consent to medical treatment holds a highly significant position because it relates to patients' rights to obtain information and determine the treatment performed on their bodies. Informed consent essentially refers to consent given by a patient after receiving adequate information regarding the medical procedure to be performed, including its purpose, benefits, risks, and available alternatives. Therefore, medical consent does not merely serve an administrative function but also operates as an instrument of legal protection for patients and healthcare professionals. From the perspective of the therapeutic relationship, such consent constitutes an important part of the legal relationship between patients and healthcare professionals and may be used as evidence in dispute resolution (Tamher et al., 2022; Nazilla et al., 2026).

Technological developments have subsequently encouraged a transition from conventional paper-based medical consent to electronic documents. Electronic informed consent enables the provision of information, the expression of consent, identity authentication, and document storage to be conducted through electronic systems integrated with hospital information systems or electronic medical records. Its implementation has the potential to improve service efficiency, reduce the use of physical documents, and provide a digital record of the consent process. However, this transformation in document form simultaneously creates new legal issues, particularly concerning document authenticity, data integrity, party authentication, and evidentiary strength in the event of a civil dispute.

Normatively, Indonesian law has recognized electronic information and electronic documents as lawful evidence. Such recognition constitutes an expansion of the conventional evidentiary system and provides a legal basis for the use of electronic documents in judicial proceedings. Law Number 11 of 2008 concerning Electronic Information and Transactions, as most recently amended by Law Number 1 of 2024, recognizes electronic information, electronic documents, and their printouts as lawful evidence. However, recognition as lawful evidence does not automatically mean that every electronic document possesses the same degree of evidentiary strength.

This issue becomes increasingly significant in the context of electronic medical agreements. Electronic medical consent documents are generally created without the involvement of a notary or other authorized public official. Therefore, from the perspective of civil law and the law of evidence, such documents do not automatically possess the character of authentic deeds. Under the construction of civil law, documents made by the parties without the intervention of an authorized public official generally possess the characteristics of private deeds. Consequently, their evidentiary value is closely related to the acknowledgment of the parties, the authenticity of the documents, and the ability of the party submitting the documents to establish their connection with the relevant legal subjects.

Evidentiary issues become more complex when an electronic medical agreement is denied by one of the parties to a dispute. For example, a patient may question whether he or she consciously and voluntarily provided consent, whether the information provided was adequate and understandable, or whether the electronic signature appearing on the document genuinely originated from the patient. Conversely, healthcare professionals or hospitals have an interest in proving that medical treatment was performed based on valid consent. In such circumstances, the substance of the document alone is insufficient. The evidentiary system must be capable of demonstrating the process through which consent was formed, the identity of the party providing consent, the time at which consent was given, the integrity of the document after its creation, and the possibility of subsequent alterations to the document.

Research on medical consent as evidence indicates that informed consent plays an important role in proving medical disputes, particularly in establishing the patient's consent to the treatment performed (Tamher et al., 2022). However, digital developments introduce new dimensions that are not entirely present in conventional consent. Yunengsih and Rahma (2024), for example, demonstrate that the use of electronic medical consent raises issues concerning the validity of electronic signatures, data security, and privacy. Similarly, studies on electronic medical records indicate that the recognition of electronic documents as evidence continues to face challenges relating to authenticity, data integrity, and the standardization of electronic systems (Razak, 2025).

Recent studies on digital informed consent in Indonesia also demonstrate that the primary issue is no longer merely whether electronic consent may be used, but rather how such consent can be authenticated, recorded, and proven when a dispute arises. Ginting, Yanto, and Suminar (2026) emphasize the continuing problems of legal certainty regarding the authentication and evidentiary aspects of digital consent in healthcare services. Similarly, research concerning the validity of electronic informed consent in hospital services confirms that clarity of information, patient understanding, voluntariness, authentication, and data integrity are essential elements in determining the validity of electronic consent (Naurah, 2025).

Accordingly, conceptual and practical issues arise concerning the relationship between the validity of electronic medical agreements and their evidentiary strength in civil proceedings. A document may satisfy the requirements for recognition as a valid electronic document; however, when it is submitted in a dispute, the judge must still assess its reliability based on the specific circumstances of the case. Such an assessment may include the identity of the signatory, the authentication mechanism employed, the type of electronic signature

used, system security, data integrity, the availability of an audit trail, and the consistency of the document with other evidence.

The urgency of this research is further reinforced by the fact that healthcare services involve two legal interests that must be protected in a balanced manner. On the one hand, patients must receive protection against medical treatment performed without valid consent or adequate information. On the other hand, healthcare professionals and hospitals require legal certainty that consent obtained and recorded through electronic systems may be used to establish the legal basis for the medical treatment performed. Uncertainty regarding the evidentiary standards applicable to electronic medical agreements may create legal uncertainty for both parties.

These issues demonstrate the need for a more specific examination of the evidentiary strength of electronic medical agreements from the perspective of Indonesian civil law. This research does not merely question the legality of electronic documents but focuses on their quality and evidentiary value when such documents are submitted in disputes between patients and healthcare professionals or hospitals. This focus is important because civil disputes fundamentally place evidence as a primary instrument for determining whether the parties' claims can be accepted.

Based on a review of previous studies, several research tendencies can be identified. Studies concerning medical consent generally position informed consent as an instrument of legal protection and evidence in medical disputes (Tamher et al., 2022; Nazilla et al., 2026). Meanwhile, research on the digitalization of healthcare services has primarily addressed the validity of electronic informed consent, system security, privacy, and the implementation of electronic medical records (Yunengsih & Rahma, 2024; Naurah, 2025). Studies concerning electronic documents in civil evidence, on the other hand, tend to focus on the general recognition of electronic documents under the Electronic Information and Transactions Law.

Nevertheless, there remains a research gap concerning studies that specifically integrate electronic medical agreements as a form of legal relationship within therapeutic relationships, their position as private deeds, and their evidentiary strength in civil disputes. These three aspects are closely interconnected. The validity of a legal relationship is not always identical to its evidentiary strength before a court. Therefore, an analysis is required to distinguish between the requirements for the formation of electronic medical consent and the evidentiary standards necessary for such documents to possess adequate evidentiary value when disputed.

This study aims to analyze the evidentiary strength of electronic medical agreements as evidence in the resolution of civil disputes in Indonesia. Specifically, this study is directed at analyzing the position of electronic medical agreements as electronic documents and private deeds within the legal relationship between patients and healthcare professionals or hospitals; examining their evidentiary strength in civil disputes, particularly when the authenticity, content, or consent of the parties to such documents is contested; and formulating the elements required to strengthen the evidentiary value of electronic medical agreements, particularly those relating to identity authentication, electronic signatures, data integrity, electronic system security, and audit trails.

To address these issues, this study employs a normative legal research method using a statutory and conceptual approach. The statutory approach is used to analyze the relationship between civil law provisions concerning agreements and evidence and regulations governing electronic documents, electronic systems, and healthcare services. The primary legal materials underlying the analysis include the Indonesian Civil Code, the Law concerning Electronic Information and Transactions and its amendments, Law Number 17 of 2023 concerning Health, Government Regulation Number 71 of 2019 concerning the Implementation of Electronic Systems and Transactions, and Regulation of the Minister of Health Number 24 of 2022 concerning Medical Records. These legal materials are systematically analyzed to determine the legal basis for the use of electronic medical agreements and their position within the civil evidentiary system.

Furthermore, the conceptual approach is used to distinguish among the concepts of authentic deeds, private deeds, electronic documents, electronic signatures, medical consent, and evidentiary strength. The analysis is then directed toward examining the relationship between the electronic characteristics of a document and the principles of evidence in civil procedural law. This problem is addressed by identifying the legal characteristics of electronic medical agreements as a form of consent within therapeutic relationships, analyzing the parameters of their evidentiary strength based on the recognition of electronic documents, identity authentication, document integrity, system reliability, and the verifiability of the documents, and

formulating an evidentiary strengthening framework that may serve as a basis for enhancing legal certainty in the use of electronic medical agreements.

Within healthcare relationships, informed consent constitutes a manifestation of respect for patient autonomy and a basis for legitimizing medical treatment. Such consent serves to demonstrate that the patient has received information and has agreed to the treatment to be performed. Tamher, Saija, and Labetubun (2022) position medical consent as an instrument relevant to proving disputes between doctors and patients. Meanwhile, Nazilla, Yusri, and Suhaimi (2026) emphasize that informed consent constitutes an important component of the therapeutic relationship and may function as documentary evidence, although its evidentiary strength cannot be separated from factual considerations concerning professional standards and the possibility of medical negligence. In electronic form, these functions remain applicable, but the mechanisms of proof undergo significant changes. The absence of physical documents and direct signing processes requires technological mechanisms capable of establishing the identity, timing, and intention of the party providing consent.

The recognition of electronic documents as evidence represents an important development in the Indonesian legal system. However, such formal recognition must be distinguished from an assessment of their evidentiary quality in specific cases. Electronic documents require systems capable of ensuring that the stored information can be accessed, displayed, and verified. In the healthcare context, Yunengsih and Rahma (2024) demonstrate that the use of electronic medical consent is closely related to the validity of electronic signatures, security, and privacy. Razak (2025) also emphasizes that electronic medical records perform an important evidentiary function in medical disputes but face challenges concerning authenticity, data integrity, and system standardization. Therefore, electronic documents cannot be assessed solely on the basis of their visual form; their evidentiary value also depends on the systems that generate and preserve them.

From the perspective of civil law, the evidentiary strength of a private deed is closely related to the acknowledgment of the signature and the contents of the document. When a document is not disputed, it may possess strong evidentiary value against the party who made it. Conversely, when the document is denied, additional evidence is required to establish its authenticity and its connection to the relevant party. The electronic nature of the document introduces additional evidentiary parameters in the form of digital authentication and data integrity. Therefore, the evidentiary strength of electronic medical agreements may be influenced by the clarity of the identity of the patient or other party providing consent, the clarity of information concerning the medical treatment being approved, the existence of mechanisms demonstrating the voluntariness of consent, the use of electronic signatures or verifiable authentication methods, the preservation of document integrity against unauthorized alteration, the reliability and security of the electronic system, and the availability of an audit trail capable of demonstrating the process of document creation and use.

Ginting, Yanto, and Suminar (2026) indicate that authentication, recordkeeping, and the capacity to establish proof constitute central issues in digital informed consent. Meanwhile, Naurah (2025) emphasizes that the validity of electronic informed consent depends on the clarity of information, patient understanding, voluntariness, as well as authentication mechanisms and data integrity. Based on these theoretical foundations and previous research findings, this study proceeds from the proposition that electronic medical agreements created without the involvement of an authorized public official are, in principle, electronic documents possessing the characteristics of private deeds, provided that they satisfy the legal requirements for valid agreements and the applicable provisions governing electronic documents.

This study also proceeds from the view that the evidentiary strength of electronic medical agreements in civil disputes is neither automatic nor absolute but is determined by the ability of such documents to establish authenticity, the identity of the parties, the voluntariness of consent, data integrity, and the reliability of the electronic system. Accordingly, the use of robust authentication mechanisms, verifiable electronic signatures, reliable security systems, and comprehensive audit trails is considered capable of strengthening the evidentiary value of electronic medical agreements and enhancing legal certainty for patients, healthcare professionals, and hospitals.

Based on the foregoing discussion, this study proceeds from the premise that the digitalization of medical consent must be accompanied by the strengthening of evidentiary systems. Legal recognition of electronic documents constitutes an initial foundation, but legal certainty in civil disputes ultimately depends on the quality of evidence that can be demonstrated before a judge. Therefore, this study is important for developing

a legal framework concerning the parameters of the evidentiary strength of electronic medical agreements as evidence in civil disputes in Indonesia, while also providing a conceptual basis for strengthening electronic systems in healthcare services in a manner that can protect the interests of patients, healthcare professionals, and healthcare facilities in a balanced manner.

RESEARCH METHODS

Research Approach and Type

This study employs a normative legal research method with a descriptive-analytical research design. The normative legal research approach was selected because this study focuses on examining legal norms, statutory regulations, legal principles, doctrines, and expert opinions related to the evidentiary strength of electronic medical agreements in civil disputes.

This study specifically examines electronic medical agreements, particularly electronic informed consent, which are created and stored through electronic systems in the provision of healthcare services. The analysis focuses on their position as private deeds and their evidentiary strength when disputes arise between patients and healthcare professionals and/or hospitals.

To obtain a comprehensive analysis, this study employs three approaches: the statutory, conceptual, and comparative approaches.

The statutory approach is used to examine the legal framework governing electronic documents, electronic signatures, medical records, healthcare services, agreements, and evidence in Indonesian civil law. The conceptual approach is used to analyze legal concepts concerning private deeds, electronic documents, electronic evidence, evidentiary strength, validity, authenticity, integrity, and the therapeutic relationship between healthcare professionals and patients. Meanwhile, the comparative approach is used to compare relevant concepts and regulations concerning electronic medical consent and electronic evidence as a basis for strengthening legal certainty in Indonesia.

Research Activity Plan

The study was conducted through several systematic stages. The first stage was the identification of legal issues related to the legal position and evidentiary strength of electronic medical agreements in civil disputes. This stage focuses on legal issues arising from the transformation of medical consent from conventional written documents into electronic medical agreements or consent.

The second stage involves the collection and classification of relevant legal materials. The legal materials obtained are categorized into primary, secondary, and tertiary legal materials based on their relevance to the research issues.

The third stage is the analysis of the legal position of electronic medical agreements as private deeds. This analysis examines whether electronic medical agreements fulfill the legal requirements for valid agreements and how their electronic form affects their legal status and evidentiary strength within the Indonesian civil law system.

The fourth stage involves analyzing the evidentiary strength of electronic medical agreements in civil disputes. The analysis focuses on document authenticity, party identification, electronic signatures, electronic data integrity, electronic system reliability, and the availability of an audit trail.

The final stage involves drawing legal conclusions and formulating recommendations to strengthen legal certainty and the evidentiary value of electronic medical agreements in Indonesia.

Scope and Object of the Research

The scope of this study is limited to a legal analysis of the evidentiary strength of electronic medical agreements as evidence in civil disputes in Indonesia.

The primary object of this study is electronic medical agreements or electronic informed consent used as evidence in disputes arising from the provision of healthcare services. This study specifically examines the position of such agreements as private deeds and their evidentiary strength when submitted in civil dispute resolution proceedings.

Substantively, the scope of this study includes:

1. the legal characteristics of electronic medical agreements;
2. the position of electronic medical agreements as electronic documents and private deeds;
3. the legal validity requirements of electronic medical agreements;

4. the evidentiary strength of electronic documents in civil proceedings;
5. the role of electronic signatures and authentication mechanisms;
6. data integrity and reliability of electronic systems used in the creation and storage of medical agreements;
7. the role of audit trails and electronic records in establishing the authenticity of electronic medical agreements; and
8. the assessment of electronic medical agreements in resolving civil disputes between patients and healthcare professionals and/or hospitals

This study does not specifically examine criminal liability, criminal malpractice, or technical evaluations of hospital information systems. These matters are addressed only to the extent that they are relevant to the analysis of the evidentiary strength of electronic medical agreements in civil disputes.

Legal Materials and Research Instruments

This study uses secondary data consisting of primary legal materials, secondary legal materials, and tertiary legal materials.

Primary Legal Materials

Primary legal materials consist of statutory regulations and legal documents that possess binding legal force and are relevant to the object of the study, including:

1. the Indonesian Civil Code;
2. Law Number 11 of 2008 concerning Electronic Information and Transactions, as amended, most recently by Law Number 1 of 2024;
3. Law Number 17 of 2023 concerning Health;
4. Government Regulation Number 71 of 2019 concerning the Implementation of Electronic Systems and Transactions;
5. Regulation of the Minister of Health Number 24 of 2022 concerning Medical Records; and
6. other relevant laws and regulations concerning electronic signatures, electronic systems, healthcare services, and civil evidence.

Secondary Legal Materials

Secondary legal materials consist of books, scientific journal articles, legal research findings, theses, dissertations, academic papers, and scholarly publications relevant to electronic documents, civil evidentiary law, medical consent, electronic medical records, and health law.

The selection of secondary legal materials prioritizes relevant and recent scientific publications concerning developments in electronic medical agreements and electronic evidence.

Tertiary Legal Materials

Tertiary legal materials consist of legal dictionaries, encyclopedias, indexes, bibliographies, and other reference sources used to explain and clarify the legal concepts and terminology employed in this study.

The primary research instruments used in this study are document studies and a legal material classification matrix. These instruments are used to systematically identify relevant legal provisions, legal concepts, expert opinions, and elements related to the evidentiary strength of electronic medical agreements.

Research Location

As this study employs a normative legal research method, it was not conducted at a specific geographical location. The study was carried out through library research and document analysis by utilizing legal sources derived from statutory regulations, official documents, legal databases, scientific journals, books, and other credible academic sources.

The locus of this study is the Indonesian legal system, particularly legal provisions governing civil agreements, evidence, electronic information and transactions, healthcare services, and electronic medical records.

Legal Material Collection Techniques

Legal materials are collected through library research and document studies. This technique involves identifying, inventorying, selecting, classifying, and examining legal materials relevant to the research issues.

Primary legal materials are obtained from official sources of statutory regulations and legal documents. Secondary legal materials are obtained from academic books, scientific journals, research findings, theses, dissertations, and other relevant scholarly publications.

The stages of legal material collection include:

1. identifying statutory regulations related to electronic medical agreements;
2. identifying legal provisions concerning private deeds and electronic evidence;
3. collecting scientific literature on electronic informed consent and electronic medical records;
4. classifying legal materials according to the research issues;
5. comparing legal provisions with legal doctrines and expert opinions; and
6. organizing the legal materials within the research analytical framework.

All legal materials used in this study were selected based on their authority, relevance, credibility, and connection to the focus of the research.

Operational Definitions of Research Concepts

Given that this study constitutes normative legal research, it does not employ research variables in the quantitative sense. Instead, it uses operational legal concepts as guidelines for conducting the analysis.

Electronic Medical Agreement

An electronic medical agreement refers to a form of agreement or consent between a patient and healthcare professionals and/or a hospital concerning medical treatment or healthcare services that is created, communicated, signed, recorded, or stored through an electronic system. In this study, this concept primarily refers to electronic informed consent.

Private Deed

A private deed is a document created by the parties without being made before or by an authorized public official. In this study, electronic medical agreements were analyzed to determine their characteristics and legal position as private deeds in electronic form.

Evidentiary Strength

Evidentiary strength refers to the legal capacity or value of a document to establish or support the truth of a legal fact during judicial proceedings. In this study, evidentiary strength is analyzed based on the authenticity, reliability, integrity, admissibility, and evidentiary value of electronic medical agreements.

Authenticity

Authenticity refers to the condition demonstrating that an electronic medical agreement genuinely originates from the person or party identified as its maker or as the party providing consent.

Electronic Data Integrity

Electronic data integrity refers to the condition in which electronic information or documents remain intact, complete, accurate, and protected from unauthorized alteration from the time they are created or stored.

Electronic System Reliability

Electronic system reliability refers to the ability of a system to create, process, store, and reproduce electronic medical agreements consistently while generating information that can be verified.

Electronic Signatures and Authentication

Electronic signatures and authentication refer to electronic mechanisms used to identify and verify the identity of the party providing consent or signing an electronic medical agreement.

Audit Trail

An audit trail refers to an electronic record documenting activities related to the creation, modification, access, authentication, and storage of electronic medical agreements. The existence of an audit trail is important for establishing the history of a document and maintaining its integrity.

Legal Material Analysis Techniques

The collected legal materials were analyzed using qualitative legal analysis. The analysis was conducted through the interpretation of legal norms, systematic examination of statutory regulations, comparison of legal provisions, and analysis of legal doctrines and expert opinions concerning the evidentiary strength of electronic medical agreements.

The stages of analysis are conducted as follows.

First, legal materials are classified based on their relevance to the legal position and evidentiary strength of electronic medical agreements.

Second, relevant legal provisions are systematically interpreted to identify the relationship between civil law, electronic information and transactions law, and regulations in the healthcare sector.

Third, the legal characteristics of electronic medical agreements are analyzed to determine their position as electronic documents and private deeds.

Fourth, the evidentiary strength of electronic medical agreements is analyzed based on several parameters, namely:

1. the validity of the underlying agreement;
2. the identity of the parties;
3. the authenticity of the electronic document;
4. the validity and verifiability of electronic signatures;
5. electronic data integrity;
6. the reliability and security of the electronic system;
7. the availability of an audit trail; and
8. the acknowledgment or denial of the document by the parties in civil proceedings.

This study employs deductive reasoning, in which the analysis begins with general legal principles concerning agreements, private deeds, electronic documents, and civil evidence and subsequently applies those principles to the specific issue of electronic medical agreements in disputes between patients and healthcare professionals and/or hospitals.

Subsequently, the results of the analysis are synthesized to draw conclusions regarding the evidentiary strength of electronic medical agreements in civil disputes in Indonesia and to formulate legal requirements that may strengthen their reliability and evidentiary value.

Through this method, the study is expected to provide a systematic legal analysis of the extent to which electronic medical agreements may be used as lawful evidence and possess evidentiary strength in the resolution of civil disputes in Indonesia.

RESULTS AND DISCUSSION

Evidentiary Strength of Electronic Medical Agreements as Evidence in Civil Disputes in Indonesia

Research Findings

Digital transformation in healthcare services has encouraged the use of electronic medical agreements, particularly electronic informed consent, as part of the implementation of electronic medical records. The transformation of documents from paper-based media to electronic media raises legal issues concerning their legal status and evidentiary strength when civil disputes arise between patients and healthcare professionals and/or hospitals.

Based on an analysis of the Indonesian Civil Code, the Law on Electronic Information and Transactions and its amendments, Government Regulation Number 71 of 2019 concerning the Implementation of Electronic Systems and Transactions, Law Number 17 of 2023 concerning Health, and Minister of Health Regulation Number 24 of 2022 concerning Medical Records, this study finds that electronic medical agreements constitute electronic documents that may be used as legal evidence in legal proceedings.

However, the recognition of an electronic document as admissible evidence does not automatically mean that the document possesses conclusive evidentiary strength. In the context of electronic medical agreements made without the involvement of an authorized public official, such documents are, by their characteristics, classified as privately executed deeds in electronic form. Therefore, their evidentiary strength differs from that of authentic deeds.

The study finds that the evidentiary strength of electronic medical agreements in civil disputes is determined by two main dimensions. First, the juridical dimension, namely compliance with legal requirements governing electronic documents and electronic evidence. Second, the technical dimension, namely the ability of the electronic system to ensure the identity of the parties, the authenticity of the document, data integrity, system security, and an electronic record of the document creation process.

These findings indicate that the primary issue lies not merely in whether an electronic medical agreement may be admitted as evidence, but rather in how strongly the document can prove the existence of the patient's consent and the disputed legal facts.

Table 1. Parameters of the Evidentiary Strength of Electronic Medical Agreements

No.	Parameter	Main Indicator	Effect on Evidentiary Strength
1	Legal validity of the document	Compliance with the legal requirements for agreements and electronic documents	Determines the basis for the admissibility of the document
2	Identity of the parties	The identities of the patient and healthcare professional can be verified	Strengthens the authenticity of consent
3	Electronic signature	Can be verified and linked to the signatory	Strengthens proof of the parties' intention
4	Data integrity	The document has not undergone unauthorized alteration	Ensures the completeness and integrity of the document
5	System reliability	The electronic system operates securely and consistently	Strengthens the reliability of the document
6	Audit trail	Records of document creation, access, and modification are available	Facilitates verification during litigation
7	Acknowledgment or denial	The document is acknowledged or disputed by the parties	Determines the need for additional evidence
8	Judicial assessment	Consistency with other evidence and the facts established during proceedings	Determines the final evidentiary value

Based on the research findings, there is a close relationship between the quality of the electronic system and the evidentiary strength of electronic medical agreements. The stronger the authentication and security mechanisms implemented by the system, the higher the level of confidence in the documents produced by that system.

The findings also indicate that the use of electronic signatures is significant in the evidentiary process. Electronic signatures supported by stronger authentication and verification mechanisms provide a higher degree of legal certainty than simple consent mechanisms, such as click consent or the use of internal PINs that are not supported by adequate verification procedures. In judicial proceedings, judges may consider user identity, system security, the existence of an audit trail, and the possibility of data manipulation when assessing electronic documents.

Table 2. Comparison of Evidentiary Strength Based on Electronic Consent Mechanisms

Consent Mechanism	Identification Capability	Verification Capability	Document Integrity	Level of Evidentiary Strength
Simple click consent	Relatively limited	Limited	Depends on the system	Relatively lower
PIN or internal authentication	Moderate	Depends on the hospital system	Moderate	Moderate
Uncertified electronic signature	Better	Can be verified according to the mechanism used	More secure	Moderate to strong
Certified electronic signature	High	High	High	Relatively the strongest

The table demonstrates that not all electronic medical agreements possess the same evidentiary quality. Differences in authentication mechanisms may result in different levels of reliability and different capacities for the document to be proven before a judge.

Discussion

1. The Legal Status of Electronic Medical Agreements as Electronic Evidence

The development of Indonesian evidentiary law has resulted in an expansion of the types of evidence that may be used in judicial proceedings. Historically, Indonesian civil procedural law recognized conventional forms of evidence, such as written evidence, witness testimony, presumptions, admissions, and oaths. The development of information technology subsequently created the need to recognize electronic information and electronic documents.

Article 5 of the Law on Electronic Information and Transactions recognizes electronic information and/or electronic documents, including their printouts, as lawful evidence. Accordingly, electronic medical agreements cannot be rejected solely because they are created or stored in electronic form.

Nevertheless, the admissibility of an electronic document as evidence must be distinguished from the issue of its evidentiary strength. Admissibility concerns whether a document may be submitted as evidence,

whereas probative value concerns the extent to which the document is capable of convincing a judge of the truth of the disputed facts.

In this context, the research findings indicate that electronic medical agreements satisfy the requirement of admissibility as evidence when they are created and administered through an electronic system in accordance with applicable legal provisions. However, their evidentiary value must still be assessed based on the characteristics of privately executed deeds and the specific circumstances surrounding the electronic document.

This finding is consistent with previous studies showing that medical consent serves an important function as an instrument for documenting the therapeutic relationship and may be used in evidentiary proceedings involving disputes between patients and healthcare professionals. In electronic form, this function remains applicable, although the evidentiary process requires additional attention to authentication and system integrity.

2. Electronic Medical Agreements as Privately Executed Deeds

Electronic medical agreements are generally made between patients and healthcare professionals or hospitals without being executed before an authorized public official. Therefore, such documents do not possess the characteristics of authentic deeds.

This characteristic places electronic medical agreements within the category of privately executed deeds. Their electronic form does not alter the fundamental nature of the document as one created by the parties without the involvement of a public official. However, the electronic form introduces additional characteristics, namely dependence on the technological system used to create, store, and reproduce the document.

Consequently, the evidentiary strength of electronic medical agreements cannot be equated with that of authentic deeds. Authentic deeds possess a higher degree of evidentiary strength because they are prepared by or before an authorized public official in compliance with specific legal formalities.

In contrast, privately executed deeds derive their evidentiary strength primarily from the acknowledgment of the document's contents and signature by the relevant parties. When a document is acknowledged, it may possess strong evidentiary value against the party who acknowledges it. Conversely, when the document is denied, the party relying on it must provide evidence supporting its authenticity and its connection to the party denying it.

In the case of electronic medical agreements, denial may become more complex because wet signatures or physical documents are not always available. Therefore, the evidentiary process must focus on the ability of the system to answer the following questions: who gave the consent, when the consent was given, to which medical procedure the consent related, and whether the document was altered after the consent was provided.

3. Authenticity as a Primary Parameter of Evidentiary Strength

Authenticity is one of the most important elements in the evidentiary assessment of electronic documents. In civil disputes, it is insufficient merely to present a document in the form of a printout or screenshot. There must be a demonstrable connection between the document and the party who is legally identified as its maker or the person who provided the consent.

In the context of electronic medical agreements, authenticity is closely related to the identification of the patient and healthcare professional involved in the consent process. Ideally, the electronic system should provide mechanisms capable of verifying the identity of users beyond merely relying on names or medical record numbers.

The findings indicate that evidentiary strength increases when the system employs authentication mechanisms capable of establishing a connection between the user's identity and the act of providing consent. Such mechanisms may include identity verification, the use of electronic credentials, multi-factor authentication, and verifiable electronic signatures.

If a patient denies having provided consent, the hospital cannot merely present a copy of the document. The hospital must be able to provide supporting evidence regarding the authentication process and the formation of consent.

Thus, authenticity in electronic medical agreements is not merely a matter of the existence of a signature, but rather a matter of proving the identity and legal intention of the party who provided consent.

4. Data Integrity and the Reliability of Electronic Systems

In addition to authenticity, data integrity is a determining factor in the evidentiary strength of electronic documents. Integrity concerns the assurance that the information contained in an electronic medical agreement has not been subject to unauthorized alteration, deletion, or manipulation after the document was created.

In medical disputes, integrity is particularly important because the content of consent may determine whether the patient received adequate information and whether medical treatment was performed based on valid consent. Any alteration to the content of the document after medical treatment has been performed may raise serious questions regarding the validity of the evidence.

Therefore, the evidentiary strength of electronic medical agreements is closely related to the reliability of the electronic system used by the hospital. The system must be capable of maintaining data security, controlling user access, recording modifications, and providing information that can be verified when necessary.

The study finds that the existence of an audit trail is one of the important elements for strengthening evidentiary value. An audit trail may demonstrate the history of document creation, the time consent was provided, the identity of users who accessed the document, modifications made to the document, and other relevant activities.

The existence of an audit trail enables the evidentiary process to rely not only on the final document but also on the history of its creation. This is particularly important when one party alleges that the document was modified or created after the medical procedure took place.

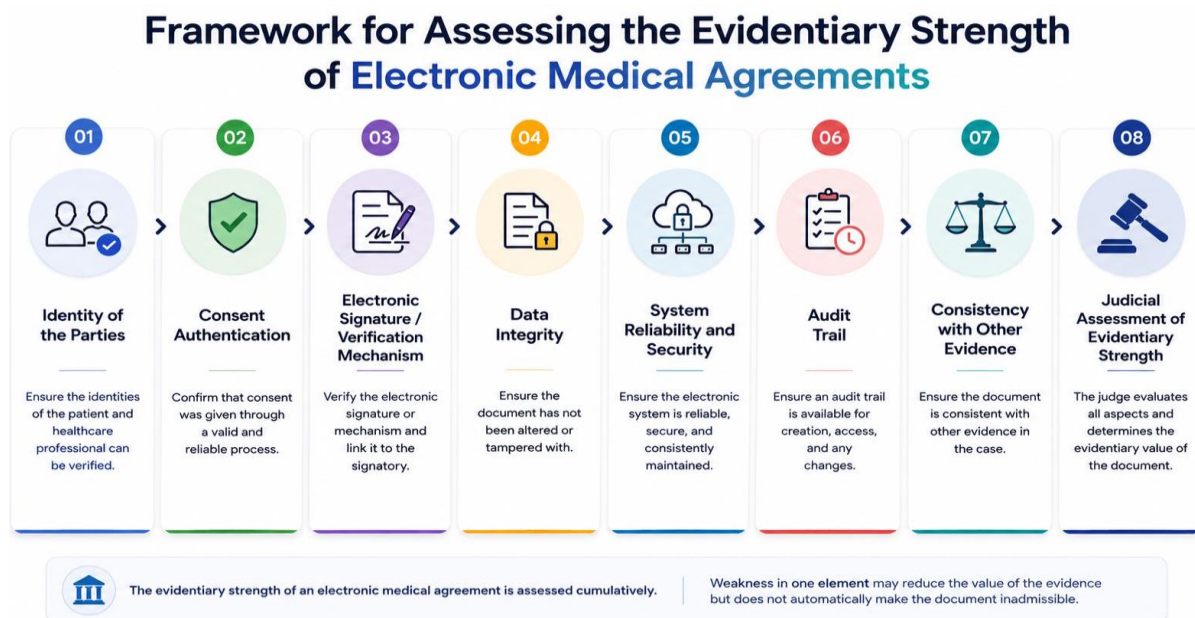


Figure 1. Framework for Assessing the Evidentiary Strength of Electronic Medical Agreements

The framework demonstrates that the evidentiary strength of electronic medical agreements is cumulative in nature. A weakness in one element does not necessarily render the document entirely inadmissible, but it may reduce the level of confidence placed in the document.

5. The Role of Electronic Signatures in Strengthening Evidence

The research findings indicate that the type of electronic consent mechanism affects the level of evidentiary strength. Electronic signatures supported by stronger authentication and verification systems provide greater evidentiary capability than simple consent mechanisms.

Certified electronic signatures offer advantages because they are associated with certification systems and more structured identity verification mechanisms. The use of cryptographic technology may also enable unauthorized changes to documents to be detected, thereby helping to preserve data integrity.

Conversely, simple click consent may demonstrate that an act of consent occurred within an electronic system. However, where such a mechanism is not accompanied by adequate identity verification, its evidentiary strength may be questioned.

Similarly, the use of an internal hospital PIN may serve as supporting evidence; however, its evidentiary strength depends heavily on access management and system security. If a single PIN may be used by multiple individuals or if there is no adequate activity record, establishing a connection between the act of consent and the user's identity becomes difficult.

This study finds that the use of certified electronic signatures provides a higher degree of evidentiary certainty than ordinary click consent because it incorporates more accountable authentication and verification mechanisms.

Nevertheless, it must be emphasized that a certified electronic signature is not the sole factor determining evidentiary strength. Judges may still assess the overall system used for the creation and storage of the document, as well as its relationship to other evidence.

6. Acknowledgment and Denial in the Evidentiary Process of Electronic Medical Agreements

As documents possessing the characteristics of privately executed deeds, the evidentiary strength of electronic medical agreements is strongly influenced by the position of the parties regarding the document.

If a patient acknowledges having provided consent through an electronic system, the issue of proving authenticity becomes relatively straightforward. The document may then be used to establish the existence of a legal relationship and consent to a particular medical procedure.

Conversely, if a patient denies ever having provided consent, the evidentiary burden becomes more complex. The hospital or healthcare professional relying on the document must be able to provide convincing grounds regarding:

- the identity of the party who provided the consent;
- the authentication mechanism used;
- the time at which the consent was provided;
- the information available when the consent was provided;
- the form of signature or consent mechanism used;
- the integrity of the document after its creation; and
- the history of activities recorded within the electronic system.

Under such circumstances, an electronic document must be supported by other evidence. Such evidence may include system logs, information regarding the hospital's standard operating procedures, authentication data, electronic medical records, and other relevant forms of evidence.

Accordingly, the evidentiary strength of electronic medical agreements is not necessarily independent or absolute. Their evidentiary value may increase when there is consistency between the electronic document, the system that generated the document, and other evidence submitted during judicial proceedings.

7. The Role of Judges in Assessing Electronic Medical Agreements

In the civil evidentiary system, judges play an important role in assessing the strength of evidence. The recognition of electronic documents as lawful evidence does not mean that every electronic document must be accepted without examining its quality and reliability.

Based on the research findings, several aspects are relevant for judicial assessment in disputes involving electronic medical agreements, namely:

- a. whether the identity of the party providing consent can be established;
- b. whether the consent was provided through an accountable procedure;
- c. whether adequate information regarding the medical procedure was made available;
- d. whether the authentication mechanism can be verified;
- e. whether the document was altered after its creation;
- f. whether the electronic system possesses an adequate level of security;
- g. whether an audit trail is available;
- h. whether there is a possibility of manipulation or unauthorized use of another person's identity; and
- i. whether the document is consistent with other evidence.

These considerations demonstrate that the evidentiary assessment of electronic documents in medical disputes is multidimensional. Judges do not merely assess the content of the document but also examine the process through which the document was created, stored, and verified.

This finding confirms that electronic medical agreements possess evidentiary characteristics that differ from those of conventional paper-based documents. In electronic documents, the technological system constitutes an inseparable component of the evidentiary process.

8. Regulatory Gaps and Issues Concerning Evidentiary Standards

This study finds that there is no specific and comprehensive national standard governing the evidentiary parameters of electronic medical agreements in civil disputes.

Regulations concerning electronic information and transactions provide general recognition of electronic documents, while healthcare regulations govern the implementation of electronic medical records. However, the relationship between these provisions and the legal construction of privately executed deeds and evidentiary rules in civil procedural law has not yet been formulated in a sufficiently specific manner.

As a result, differences in implementation may occur between hospitals. Such differences may involve authentication methods, the types of electronic signatures used, document storage procedures, audit trail management, and data modification mechanisms.

This study finds a need for harmonization between the Indonesian Civil Code, the Law on Electronic Information and Transactions, Law Number 17 of 2023 concerning Health, Government Regulation Number 71 of 2019, and technical regulations concerning medical records and electronic signatures to establish more uniform evidentiary standards.

The absence of uniform standards may create legal uncertainty. Patients may face difficulties in ensuring the validity of the consent process, while healthcare professionals and hospitals may encounter difficulties in proving that consent was genuinely provided by the patient.

9. Synthesis of the Research Findings

Based on the overall analysis, the evidentiary strength of electronic medical agreements may be constructed at three levels.

First, the level of admissibility of evidence. At this level, electronic medical agreements may be submitted as evidence because Indonesian law recognizes electronic information and electronic documents as lawful evidence.

Second, the level of evidentiary reliability. At this level, the strength of the document is determined by authenticity, data integrity, party identification, electronic signatures, system security, and the existence of an audit trail.

Third, the level of evidentiary assessment in a specific dispute. At this level, the judge assesses the relationship between the electronic document, the parties' arguments, and other evidence available during the proceedings.

Table 3. Construction of the Levels of Evidentiary Strength

Level	Focus of Assessment	Consequence
Admissibility	Whether the electronic document may be submitted as evidence	The document may be examined during judicial proceedings
Reliability	Authenticity, integrity, authentication, system security, and audit trail	Determines the level of confidence in the document
Concrete evidentiary assessment	Acknowledgment or denial and consistency with other evidence	Determines the evidentiary value in the judge's decision

Through this construction, it can be understood that the evidentiary strength of electronic medical agreements is neither singular nor absolute. Such documents may possess high evidentiary strength when supported by reliable electronic systems and verifiable authentication mechanisms. Conversely, weaknesses in user identification, system security, data integrity, and the absence of an audit trail may reduce their evidentiary value.

10. Legal Implications for the Resolution of Civil Disputes

The principal implication of this study is that the digitalization of medical consent must be accompanied by the development of systems designed with legal evidentiary requirements in mind. Hospitals must not merely ensure that the consent process can be conducted electronically; they must also ensure that the process can be proven again if a dispute arises.

Therefore, an electronic medical agreement system should ideally comply with several principles:

- a. identifiability, namely the ability of the system to identify the party providing consent;
- b. authenticity, namely the ability to prove the origin and genuineness of the document;
- c. integrity, namely the assurance that the document has not been altered without authorization;
- d. security, namely protection against unauthorized access and manipulation;
- e. traceability, namely the availability of an audit trail for all significant activities; and
- f. verifiability, namely the ability of the document and the system to be verified when required in legal proceedings.

By applying these principles, electronic medical agreements may provide more balanced legal protection. For patients, a transparent and verifiable system provides assurance that consent is genuinely given based on valid intention. For healthcare professionals and hospitals, such a system provides a stronger evidentiary basis when disputes arise.

Accordingly, the findings of this study demonstrate that electronic medical agreements may be used as lawful evidence in civil disputes in Indonesia, but their evidentiary strength as privately executed deeds is relative and not equivalent to that of authentic deeds. Their strength depends on the acknowledgment of the parties and the ability of the electronic system to establish authenticity, the identity of the person providing consent, data integrity, system security, the use of verifiable electronic signature mechanisms, and the existence of an audit trail. These findings are consistent with the main findings of the thesis, namely that judges must assess not only the contents of the document but also the process through which it was created and the reliability of the electronic system that generated the document.

CONCLUSION

Based on the research findings and discussion, it can be concluded that electronic medical agreements constitute electronic documents that may be used as legal evidence in the resolution of civil disputes in Indonesia. As they are created without the involvement of an authorized public official, electronic medical agreements, by their nature, are categorized as private deeds in electronic form. Therefore, their evidentiary strength cannot be equated with that of authentic deeds and may still be challenged or denied by the parties.

The evidentiary strength of electronic medical agreements depends on the ability to establish the authenticity of the document, the identity of the parties, the validity of the consent mechanism, data integrity, and the reliability and security of the electronic system used. The existence of verifiable electronic signatures and an audit trail constitutes an important factor in strengthening their evidentiary value. Where an electronic medical agreement is challenged or denied, hospitals and/or healthcare professionals must be able to provide supporting evidence concerning the authentication process, the time at which consent was given, the identity of the person providing consent, and the history of the creation and modification of the document.

Accordingly, electronic medical agreements may possess strong evidentiary value, provided that they are created and managed through reliable and secure electronic systems capable of ensuring the authenticity and integrity of the data. Nevertheless, the final assessment of their evidentiary strength remains within the authority of the judge, who must consider the overall facts and evidence presented during the proceedings.

ACKNOWLEDGEMENTS

The authors would like to express their sincere gratitude to all individuals and institutions that contributed to the completion of this research and the preparation of this manuscript. Special appreciation is

extended to the authors' affiliated institutions for their academic support and encouragement throughout the research process. The authors also gratefully acknowledge the valuable assistance, guidance, and support provided by colleagues and other parties who contributed to the development of this study. Their contributions have been invaluable in supporting the successful completion of this research.

REFERENCES

- Ginting, J. D., Yanto, O., & Suminar, S. R. (2026). Legal validity of digital informed consent in Indonesian telemedicine: A doctrinal and regulatory analysis under Law Number 17 Year 2023 concerning health. *International Conference on The State, Law, Politics & Democracy*.
- Kementerian Kesehatan Republik Indonesia. (2022). Peraturan Menteri Kesehatan Republik Indonesia Nomor 24 Tahun 2022 tentang rekam medis. *Berita Negara Republik Indonesia Nomor 829 Tahun 2022*.
- Kitab Undang-Undang Hukum Perdata (Burgerlijk Wetboek).
- Naurah, G. (2025). The validity of electronic informed consent in hospital services: A juridical analysis based on Law Number 17 of 2023 on health. *Proceedings of International Conference on Islamic Community Studies*.
- Nazilla, S., Yusri, & Suhaimi. (2026). The legal position of medical informed consent as a means of legal protection for doctors and patients. *International Journal of Law and Society*, 3(3). DOI: 10.62951/ijls.v3i3.954 (https://doi.org/10.62951/ijls.v3i3.954?utm_source=chatgpt.com)
- Peraturan Pemerintah Nomor 71 Tahun 2019 tentang Penyelenggaraan Sistem dan Transaksi Elektronik.
- Razak, K. (2025). Analisis yuridis terhadap rekam medis elektronik sebagai alat bukti sengketa medis. *Citizen: Jurnal Ilmiah Multidisiplin Indonesia*, 5(3). DOI: 10.53866/jimi.v5i3.854 (https://doi.org/10.53866/jimi.v5i3.854?utm_source=chatgpt.com)
- Republik Indonesia. (2008). Undang-Undang Nomor 11 Tahun 2008 tentang Informasi dan Transaksi Elektronik, sebagaimana telah beberapa kali diubah, terakhir dengan Undang-Undang Nomor 1 Tahun 2024.
- Republik Indonesia. (2023). Undang-Undang Nomor 17 Tahun 2023 tentang Kesehatan.
- Tamher, G., Saija, R., & Labetubun, M. A. H. (2022). Penggunaan persetujuan medis sebagai alat bukti. *TATOHI: Jurnal Ilmu Hukum*, 1(11), 1103–1119. DOI: 10.47268/tatohi.v1i11.868 (https://doi.org/10.47268/tatohi.v1i11.868?utm_source=chatgpt.com)
- Yunengsih, Y., & Rahma, S. A. (2024). The legal analysis of electronic medical consent in the inpatient department of RS PKU Muhammadiyah Petanahan. *Jurnal EduHealth*, 15(2).