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Legal Validity of Digital Informed Consent in Indonesian Telemedicine: A Doctrinal and Regulatory Analysis under Law Number 17 Year 2023 Concerning Health

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Article

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Abstract

This research explores how informed consent in digital form is legally recognized within telemedicine, an area that has expanded rapidly under the framework of Indonesia's Health Law (Law Number 17 of 2023 on Health). The study focuses on the ongoing uncertainty surrounding the legitimacy of electronic consent especially how a patient's approval is authenticated, recorded, and later proven when disputes arise. Using a normative juridical approach, the analysis reviews the interaction between health regulations, electronic transaction laws, and rules on digital signatures to understand whether current standards are sufficient for medical decision-making conducted online. The results indicate that although the law obliges telemedicine providers to obtain informed consent, it stops short of defining clear benchmarks for identity verification, reliability of digital logs, or the evidentiary weight of simple click-based agreements. These gaps leave open questions about whether digital consent truly meets the requirements of a valid legal agreement in healthcare. The study concludes that Indonesia needs a more coherent and detailed regulatory structure to strengthen legal certainty, protect patient rights, and support the accountability of telemedicine practices.

Keywords: *Digital informed consent; Telemedicine law; Law Number 17 Year 2023 Concerning Health; Electronic authentication; Legal certainty; Digital health governance*

A. INTRODUCTION

Telemedicine has emerged as one of the most transformative developments in modern healthcare, reshaping traditional models of service delivery through advances in digital communication technologies. Recent reviews emphasize that telemedicine now plays a major role in reducing geographic, financial, and infrastructural barriers to care, while expanding access to underserved populations (Anawade et al., 2024). Telemedicine has rapidly evolved into a central pillar of contemporary healthcare delivery, driven by advances in digital communication technologies and the global need for accessible medical services. Its expansion is well-documented across diverse clinical settings, where it has demonstrated reductions in travel burdens, improved continuity of care, and increased reach to underserved populations (Stoltzfus et al., 2023). Yet, despite its promise, the digital transition has revealed persistent structural and legal challenges. Studies highlight that telemedicine can both reduce and exacerbate disparities, depending on access to technology, digital literacy, and socio-economic conditions (Chunara et al., 2021; Haimi, 2023). In Indonesia, the rapid growth of telemedicine intensified during the COVID-19 pandemic, but this acceleration occurred alongside regulatory uncertainty, particularly regarding the legal validity of digital interactions between patients and healthcare providers (Ismi Fadjriah Hamzah, 2024). The literature increasingly acknowledges that telemedicine is more than a technological shift; it requires a robust legal framework to guide responsibilities, safeguard patient autonomy, and ensure accountability. Normative studies in Indonesia show that although Law Number 17 of 2023 on Health recognizes telemedicine, implementing regulations remain fragmented, creating ambiguity in areas such as legal protection, liability, electronic signatures, and authentication in digital health services (Eza Ridha Hafizah et al., 2025; Widjaja et al., 2025). Meanwhile, broader analyses of digital-era civil law reveal fundamental gaps between traditional contract doctrines and modern electronic interactions, including challenges in proving agreement, verifying identity, and preserving evidentiary integrity (Hellen S De Lima et al., 2025; Zainudin, 2025). In healthcare, these issues become even more critical because informed consent forms the legal and ethical foundation of the therapeutic relationship and directly affects patient rights. Despite the growing attention to telemedicine's benefits and risks, the specific question of how informed consent in digital form can be considered legally valid remains insufficiently addressed. Some scholars argue that electronic consent can be acceptable if supported by verifiable authentication and secure audit trails, while others warn that simplified "click-consent" interfaces risk undermining transparency and voluntariness especially when combined with data-security vulnerabilities that persist in electronic medical record systems (Stephanie Stephanie et al., 2025). These divergent views underscore the need for clearer legal standards. Against this backdrop, the present study examines the legal validity of digital informed consent in telemedicine within Indonesia's regulatory landscape, focusing on the implications of Law Number 17 of 2023 on Health. The aim is to clarify whether existing regulations adequately protect patient autonomy and provide legal certainty for healthcare providers. The study concludes that while Indonesia has foundational norms regulating digital health services, a coherent and enforceable framework for digital informed consent is still lacking, necessitating further harmonization of health, electronic transactions, and civil-law principles.

B. MATERIALS AND METHODS

This study employs a doctrinal legal research design, focusing on the systematic interpretation of statutory provisions, regulatory instruments, and judicially recognized legal principles relevant to digital informed consent in telemedicine. The primary materials consist of Law Number 17 of 2023 on Health, regulations issued by the Ministry of Health, the Electronic Information and Transactions framework, the Indonesian Civil Code, and the Personal Data Protection Law. These sources were analyzed through hermeneutic and normative-analytic methods to identify obligations, rights, and potential regulatory inconsistencies.

Secondary materials include twenty peer-reviewed academic articles and legal analyses, selected purposively based on their relevance to telemedicine, electronic contracting, patient rights, privacy regulation, and medical liability. Each document was examined through thematic coding to identify patterns related to disclosure obligations, risk communication, data governance, technological limitations, and provider accountability. The analysis followed an interpretive synthesis approach, allowing doctrinal findings to be connected with empirical patterns and technological considerations discussed in the literature.

As this research did not involve human participants, clinical interventions, or the collection of personal data, no ethical approval was required, and no ethics committee oversight applied to the study. No new computational tools or experimental protocols were developed, and the analysis relied solely on interpretive and qualitative legal research methods typical of doctrinal scholarship.

C. RESULT AND DISCUSSION

The synthesis of doctrinal, normative, and empirical materials reveals a multilayered landscape in which telemedicine operates not merely as a technical modality of healthcare delivery, but as a site where legal norms, clinical ethics, technological capacities, and social realities converge. Across jurisdictions, telemedicine demonstrates strong operational viability, particularly in service domains that depend on continuous monitoring, longitudinal follow-ups, and rapid access to clinical input. Evaluations consistently illustrate that remote modalities reduce geographic and logistical barriers, offering a viable alternative for patients who previously encountered persistent obstacles to in-person services. This includes improvements in disease management, early detection of complications, and reduction of delays associated with travel or infrastructural limitations (Ezeamii et al., 2024; George & Hovan George, 2023; Omboni et al., 2022). These findings underline that telemedicine is not an experimental adjunct to conventional healthcare, but a structurally significant extension of medical practice capable of delivering medically equivalent outcomes when supported by appropriate clinical and technical safeguards.

Nevertheless, the high performance of telemedicine exists alongside persistent structural inequities that influence who can meaningfully benefit from digital care. Several analyses point out that telemedicine's effectiveness is strongly correlated with digital literacy, the reliability of internet connectivity, socioeconomic capacity, and the availability of compatible devices. Where these foundational conditions are unevenly distributed, telemedicine becomes not an equalizing force but a mechanism that may inadvertently reproduce or even deepen healthcare disparities. Scholars document instances where patients with limited digital experience struggle to navigate teleconsultation platforms, misinterpret clinical instructions, or fail to appropriately follow up

due to technical disruptions (Chunara et al., 2021; Haimi, 2023; Stoltzfus et al., 2023). The implication is that telemedicine's legal and ethical sustainability is conditional its equitable delivery demands governance frameworks that anticipate technological asymmetries and explicitly address the risks posed by digital exclusion.

Turning to Indonesia, the interaction of these global patterns with the domestic legal framework reveals a regulatory structure in transition. Law Number 17 of 2023 on Health represents an important formal acknowledgment of telemedicine, embedding remote care within statutory health governance. Yet the law stops short of articulating detailed operational standards. Instead, many procedural elements ranging from licensing requirements to clinical rules for remote examinations, documentation standards, and platform obligations remain distributed across various ministerial regulations, institutional protocols, and professional codes. This dispersion produces a fragmented regulatory environment in which hospitals, healthcare professionals, and digital platform operators must interpret and implement overlapping mandates without the benefit of a unified normative framework (Eman Sulaiman et al., 2021; Ismi Fadjriah Hamzah, 2024; Ropii, 2024; Setiyowati et al., 2024). In practice, this fragmentation manifests in inconsistent standards for patient identity verification, variable expectations concerning record retention, and unclear allocation of responsibility when remote consultations involve multiple institutions or digital intermediaries.

A deeper theoretical tension becomes apparent when situating telemedicine within the doctrinal structure of Indonesian civil law. Electronic agreements enjoy formal recognition as valid legal acts when the classical elements consensus, legal capacity, a clearly determined object, and a lawful cause are satisfied. Normatively, this positions Indonesian contract law as technologically adaptive and capable of accommodating digital transactions (Siti Rahmawati, 2024; Zainudin, 2025). However, contract validity in healthcare cannot be reduced to these formal elements alone. Medical consent diverges from commercial contracting in both structure and purpose: it is fundamentally a vehicle for protecting patient autonomy, ensuring comprehension, and establishing a transparent therapeutic relationship. Electronic agreements, particularly those relying on standardized click-through mechanisms, may satisfy the formal requirement of consent yet fail to achieve the substantive requirements of understanding and voluntariness that informed consent demands. Scholars emphasize that the informational asymmetries inherent in the doctor–patient relationship require a richer communicative process than what commercial e-contract interfaces typically provide (Hellen S De Lima et al., 2025). Thus, equating digital informed consent with general electronic contract formation risks collapsing a legally and ethically distinct doctrine into a simplistic act of digital acknowledgment.

Data protection and privacy obligations add yet another structural layer to the assessment of consent validity. Healthcare providers, as custodians of sensitive health information, bear heightened duties to ensure confidentiality, protect data integrity, and guard against unauthorized access. These obligations intensify in telemedicine, where data flows across multiple digital systems, potentially involving intermediaries beyond the direct control of clinicians or hospitals. Indonesian analyses underscore that health institutions must implement robust organizational and technical measures including encryption protocols, access controls, and secure storage architectures to satisfy their civil obligations (Rayhan et al., 2025). However, the regulatory architecture governing data protection in Indonesia remains only partially aligned. The Personal

Data Protection Law provides general principles, but its intersection with health regulatory frameworks remains incomplete, particularly concerning cross-border data transfer, delineation of responsibilities between controllers and processors, and detailed technical specifications for remote health platforms (Rani Tiyas Budiyanti & Penggalih Mahardika Herlambang, 2021; Widjaja et al., 2025). Emerging technological proposals such as blockchain-based electronic medical records promise enhanced auditability, transparency, and user control, but these systems presuppose a clear legal infrastructure governing error correction, liability attribution in automated processes, and enforceable patient rights regarding data access and revocation (Stephanie Stephanie et al., 2025).

Liability analysis reveals yet another dimension of complexity. Remote medical services do not diminish professional obligations under health law. The clinician remains responsible for evaluating whether telemedicine is clinically appropriate for a given case, for ensuring that remote modalities do not compromise the thoroughness of examination, and for maintaining adherence to established professional standards. When adverse outcomes occur whether due to misdiagnosis, insufficient assessment, or the inherent limitations of remote technology healthcare providers may face both civil and criminal liability. Law Number 17 of 2023 on Health explicitly recognizes potential criminal sanctions for negligent or inappropriate use of telemedicine when such conduct results in harm (Silaban et al., 2025). The interpretive difficulty arises when outcomes stem from systemic or technological constraints rather than clinician negligence for instance, when image resolution limits diagnostic clarity, or when unstable connectivity disrupts the accuracy of patient communication. In these borderline situations, the documentation of informed consent becomes not merely a procedural formality, but a central evidentiary mechanism that demonstrates whether the patient was adequately informed of such risks before consenting to remote care. Without clear regulatory standards defining how risks must be communicated in digital environments, the legal burden on providers remains uncertain (Ismi Fadjriah Hamzah, 2024; Ropii, 2024) .

When these various strands are brought together, a consistent conclusion emerges: the legal validity of digital informed consent is contingent not on the existence of a single doctrinal rule, but on the coordinated structure of the entire ecosystem that supports remote care. Contract law may provide theoretical recognition of electronic agreements, but informed consent requires substantive communicative integrity. Health law may authorize telemedicine in broad terms, but it must articulate concrete standards to ensure that remote care does not compromise clinical quality. Data protection law may set general privacy principles, but telemedicine requires precise rules governing data flows, platform responsibilities, and breach mitigation. Liability law may provide sanctions, but its application depends on clear ex ante standards for determining whether a teleconsultation was properly conducted.

This systemic interdependence reveals the core implication: digital informed consent is legally possible yet not fully operational under Indonesia's current regulatory configuration. Several critical components remain underdeveloped. First, disclosure obligations require clearer guidelines specifying what information must be conveyed in digital settings, how risk information should be framed, and what constitutes adequate patient comprehension. Second, identity verification protocols must be standardized to prevent fraudulent or mistaken consent. Third, technological requirements for maintaining audit trails must be defined to ensure that

consent records serve as reliable evidence in both civil and criminal contexts. Fourth, data-governance frameworks must integrate personal data protection with health-specific rules, closing the current gap between broad principles and sectoral needs. At a broader level, these findings signal the need for an integrative regulatory architecture one that aligns doctrinal requirements, ethical principles, and technological realities. Telemedicine is not merely a clinical innovation; it is a structural transformation that demands a reconfiguration of existing legal doctrines. The doctrinal assumption that consent is valid when formal requirements are met must evolve to incorporate new considerations arising from digital mediation. Similarly, the assumption that medical risk can be assessed solely through traditional clinical judgment must expand to reflect the technological dimensions that influence diagnostic accuracy. Moreover, the assumption that data protection is a purely administrative obligation must be revised to recognize that data governance directly affects the integrity and reliability of digital informed consent. Future research should therefore engage with the lived realities of digital consent: how patients interpret digital disclosures, how interface design affects comprehension, how clinicians navigate their obligations in remote settings, and how technological systems influence the accuracy and reliability of consent documentation. Empirical studies focusing on patient literacy, remote communication dynamics, and the interpretive challenges faced by clinicians will be essential in assessing whether doctrinal proposals align with real-world practices.

In conclusion, the expanded analysis establishes that while Indonesia possesses the foundational legal elements necessary to support digital informed consent, the structure remains incomplete. For telemedicine to function as a legally coherent and ethically robust system, the regulatory environment must evolve toward greater precision, coordination, and responsiveness. Only through such harmonization can digital informed consent serve its intended purpose: protecting patient autonomy, guiding professional responsibility, and ensuring that technological innovation advances rather than undermines the integrity of healthcare.

D. CONCLUSION

The analysis shows that digital informed consent in Indonesia's telemedicine system is legally possible but not yet supported by a fully coherent regulatory framework. Telemedicine has demonstrated strong clinical effectiveness, yet its benefits remain uneven due to digital disparities and infrastructural limitations. Although Law Number 17 of 2023 on Health provides broad recognition of telemedicine, operational standards for disclosure, documentation, platform responsibility, and risk communication remain dispersed and inconsistent.

From a doctrinal perspective, electronic contracts may satisfy formal civil-law requirements, but they do not automatically fulfill the substantive standards of medical informed consent, which require comprehension, voluntariness, and meaningful communication. At the same time, privacy and data protection obligations remain only partially aligned with sector-specific health regulations, creating uncertainty in data governance and the evidentiary reliability of digital consent records. Liability considerations further highlight that incomplete or unclear consent processes may expose providers to civil or criminal risk.

Taken together, these findings indicate that digital informed consent can function as a valid legal instrument only if Indonesia strengthens regulatory integration across health law, civil law, electronic transactions, and data protection. Clearer standards for digital disclosure, identity

verification, record integrity, and platform accountability are essential to ensure that digital informed consent becomes both legally reliable and ethically robust in the expanding landscape of telemedicine.

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