# Toward Social Justice in Digital Transformation: Legal and Ethical Governance of Electronic Medical Records for Global Welfare

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**Abstract:** The accelerating digital transformation of healthcare across countries—driven by the adoption of Electronic Medical Records (EMR)—has reshaped the relationship between technology, ethics, and law. While EMR systems promise efficiency and interoperability, they also raise pressing issues of privacy, accountability, and equitable access. In developing contexts such as Indonesia, the challenge lies not only in technological implementation but also in ensuring that digital governance upholds the principles of social justice and human dignity. This study investigates how legal and ethical frameworks governing EMR in Indonesia align with global standards of justice and digital welfare. It aims to identify the normative gaps between regulation, ethics, and practice in digital health governance, proposing a regional framework for "digital justice." Employing a qualitative legal-ethical approach, the study conducts comparative document analysis and case study evaluation of EMR regulations, including Indonesia's Law No. 27/2022 on Personal Data Protection (Republic of Indonesia, 2022). These are benchmarked against international references such as the General Data Protection Regulation (GDPR), the WHO Digital Health Ethics Framework, and the OECD Principles on Data Governance. The comparative analysis reveals four thematic insights: (1) legal compliance and ethical governance; (2) digital inclusion and justice are hindered by structural disparities; (3) accountability mechanisms are underdeveloped; and (4) social justice principles are not yet institutionalized in digital health policy. The paper argues that sustainable digital transformation must integrate ethical equity, legal accountability, and participatory governance as interdependent pillars of "social justice in digital transformation." The proposed model contributes to policy harmonization in Indonesia and reinforces the legitimacy of digital health governance within global welfare discourse.

**Keyword:** Social Justice, Digital Transformation, Electronic Medical Records, Data Protection, Ethical Governance, Indonesia.

## INTRODUCTION

The digital transformation of healthcare represents one of the most profound technological shifts in contemporary governance. Across the world, governments and health institutions are increasingly adopting Electronic Medical Record (EMR) systems to enhance efficiency, interoperability, and transparency in medical data management (Amalia et al., 2021). EMR systems enable rapid information sharing between healthcare providers, improve continuity of care, and contribute to cost reduction and evidence-based decision-making (OECD, 2022). However, the rise of digital healthcare also exposes citizens to new vulnerabilities: data breaches, unequal access to digital services, and the potential commodification of sensitive health information (Černý, 2020)

In developing regions such as Indonesia digital transformation in healthcare occurs within complex institutional landscapes—marked by uneven regulatory enforcement, limited digital infrastructure, and persistent social inequality (Nababan, 2024) Rohmah, A. 'A., Rachmawati, R., & Mei, E. T. W. (2023). While digital innovation is often celebrated as a pathway to modernization, it also risks reinforcing existing disparities unless accompanied by strong ethical and legal governance (Said & Nurhayati, 2021). Within these contexts, questions of fairness, accountability, and legitimacy become central. Can digital transformation advance human welfare equitably? How can governments ensure that data-driven systems respect both human rights and cultural diversity?

The implementation of Electronic Medical Records (EMR) offers a critical lens to address these questions. As a core component of national digital health strategies, EMR initiatives are now being rolled out across the world under various frameworks. Indonesia's *Satu Sehat Platform*, launched in 2023 by the Ministry of Health, aims to unify patient health data nationwide through a centralized, interoperable digital system. Many regulatory regimes focus primarily on procedural compliance rather than substantive justice or moral accountability (Mahmood & Ismail, 2022). For instance, while Indonesia's *Law No. 27/2022 on Personal Data Protection (UU PDP)* reflects alignment with the European *General Data Protection Regulation (GDPR)*, the law's enforcement mechanisms and institutional capacities remain underdeveloped.

From a theoretical standpoint, this study situates digital transformation within the framework of social justice and legitimacy theory. Social justice, rooted in Rawls' (Said & Nurhayati, 2021) notion of fairness as equality of opportunity, demands that technological and institutional innovations should not exacerbate inequalities but rather benefit the most disadvantaged groups. In digital health governance, this translates into equitable access to digital infrastructure, inclusive policy-making, and transparent data management. Legitimacy theory complements this by emphasizing that institutions derive their authority not merely from formal legality but from societal approval and moral justification (Suchman, 1995). In digital ecosystems where citizens often lack control over their personal data, legitimacy becomes synonymous with trust.

The moral dimension of digital governance has been further advanced (Černý, 2020)) through his concept of *information ethics*, which argues that data-driven technologies must serve the good of the informational environment itself. From this view, ethical digital transformation is not solely about compliance with laws but about cultivating "infostructures" that promote human dignity and sustainability. Applying these perspectives to Indonesia reveals that while legal frameworks are gradually converging with global standards (such as the GDPR and the WHO's Digital Ethics Framework), ethical practices and institutional trust remain underdeveloped.

Consequently, there is an urgent need for integrated frameworks that bridge law, ethics, and social policy. This paper responds to that gap by exploring how legal and ethical norms can be harmonized to promote social justice in digital healthcare. It argues that digital

transformation is not value-neutrality embodies the moral choices of societies and governments. The Indonesia experience offers a particularly rich case because it combines rapid technological adoption with diverse political and legal traditions. By examining EMR governance across Indonesia, Malaysia, Singapore, and Vietnam, this study identifies the opportunities and constraints facing regional digital health integration and proposes a conceptual model of "social justice in digital transformation."

This research contributes to literature in three ways. First, it provides a comparative legal-ethical analysis that maps the evolving digital health landscape in Indonesia against global norms of privacy and justice. Second, it advances theoretical synthesis by linking social justice, legitimacy theory, and digital ethics into a unified analytical framework for digital governance. Third, it offers policy implications for regional harmonization under the Indonesia framework, advocating for shared standards of ethical digital governance that balance innovation with protection of individual rights.

Understanding digital transformation through a justice-oriented lens requires integrating multiple theoretical perspectives that capture its legal, ethical, and institutional dimensions. This study draws upon three interrelated theoretical foundations—Social Justice Theory, Legitimacy Theory, and Digital Ethics Theory—to analyze how governance mechanisms in Indonesia These frameworks collectively explain why technology cannot be evaluated solely in terms of functionality but must also be assessed by its contribution to human welfare and institutional trust.

**Social Justice Theory: Fairness and Equity in Digital Governance**

At the heart of this study lies *Theory of Justice (Rawls, 1971)*, which conceptualizes justice as fairness. Rawls posits that a just society is one where social and economic inequalities are arranged to benefit the least advantage and where all citizens enjoy equal opportunities. His two fundamental principles, the *liberty principle* and the *difference principle*—provide a moral foundation for evaluating public policy and governance (Said & Nurhayati, 2021). In digital governance, these principles demand that technological innovation be guided by equitable access, inclusiveness, and transparency.

Applying Rawls's framework to healthcare digitalization means that EMR systems should not merely optimize efficiency but must also enhance distributive justice (Rawls, 1971). Access to digital health tools should not depend on socioeconomic status, geographical location, or institutional privilege. For instance, while Singapore's *National Electronic Health Record (NEHR)* ensures near-universal connectivity, rural populations in Indonesia continue to face infrastructural barriers that impede equitable access to EMR systems. From a Rawlsian standpoint, such disparities represent structural injustices that must be mitigated through redistributive policy and digital inclusion programs.

Furthermore, Rawls's emphasis on the *veil of ignorance*—the idea that policy should be designed as if one were unaware of one's position in society—encourages governments to adopt neutral, citizen-centric approaches to data governance (Rawls, 1971). This implies developing regulations that protect the privacy and rights of all users equally, rather than privileging state or corporate interests. In the context of digital transformation, social justice extends beyond economic redistribution to encompass informational equity, ensuring that citizens have control, knowledge, and consent regarding their personal data.

**METHOD**

This study employs a qualitative legal-ethical research design that integrates document analysis, comparative benchmarking, and case-based examination. The qualitative approach was chosen because it allows for a deeper understanding of the normative, institutional, and ethical contexts that shape digital transformation, particularly in the

governance of electronic medical records (EMR). Quantitative methods may reveal correlations and performance metrics, but they rarely capture the interpretive dimensions of justice, legitimacy, and morality that underpin digital governance (Creswell, 2014).

The legal-ethical approach used here recognizes that digital transformation in healthcare is simultaneously a technological and normative process—one that must be analyzed not only through regulatory compliance but also through its moral consequences for individuals and societies. This research therefore seeks to interpret the alignment (or misalignment) between law, ethics, and social justice in Inonesia EMR systems.

## Data Sources and Scope

The analysis covers, Primary Legal Documents, *Indonesia:* Law No. 27/2022 on Personal Data Protection (UU PDP); Minister of Health Regulation No. 24/2022 on Electronic Medical Records; and the National Health Digitalization Blueprint (*Satu Sehat Platform*). *General Data Protection Regulation (GDPR, EU 2016/679)* for benchmarking privacy and accountability principles. *WHO Digital Health Ethics Framework (2021)* and *OECD Principles on Health Data Governance (2022)* as normative standards.

Data were analyzed through qualitative content analysis following the interactive model proposed (Miles & Huberman, 2016)—comprising three iterative steps: *data condensation, data display,* and *conclusion drawing/verification.*

Like most qualitative legal analyses, this study acknowledges certain limitations. It relies primarily on documentary evidence rather than empirical fieldwork; thus, interpretations of enforcement effectiveness are based on publicly reported outcomes rather than direct institutional observation.

## RESULTS AND DISCUSSION
### Evolving Legal Accountability and Regulatory Coherence

Indonesia's digital transformation in healthcare is anchored by two landmark policies: Law No. 27/2022 on Personal Data Protection (UU PDP) and Minister of Health Regulation No. 24/2022 on Electronic Medical Records (EMR). These frameworks collectively establish the legal infrastructure for managing digital health data in a manner consistent with global privacy norms such as the GDPR. Article 58 of the UU PDP designates health data as *"sensitive personal data that must be processed under special safeguards to prevent misuse and ensure confidentiality."* This clause aligns Indonesia with international standards but poses operational challenges, particularly regarding interoperability among healthcare providers.

The *Satu Sehat Platform*, launched in 2023 as part of the Digital Health Transformation Blueprint, integrates EMR systems across public and private healthcare institutions Ministry of Health of the Republic of Indonesia, 2022). While it enhances efficiency and continuity of care, the system still depends on fragmented governance structures: the Ministry of Health regulates data use within healthcare, while the Ministry of Communication and Informatics oversees data protection compliance. This dual authority produces regulatory ambiguity and overlapping jurisdictions.

The findings indicate that Indonesia's legal accountability remains in a transitional phase. Although the UU PDP institutionalizes individual data rights—such as consent, correction, and deletion, the enforcement ecosystem lacks independence and consistency. The absence of a fully operational. Data Protection Authority delays effective redress for citizens (Srilaksmi et al., 2023). Hence, Indonesia exhibits normative advancement but institutional immaturity, marking a gap between legal formulation and administrative realization.

**Ethical Oversight and Inclusion Challenges**

Ethical governance of EMR in Indonesia remains nascent and largely procedural (Morreim, 2025). The *Satu Sehat Platform* promotes data interoperability but has yet to establish a permanent ethical oversight body. Current ethics evaluation falls under ad hoc ministerial committees, which assess data privacy compliance rather than broader justice-oriented considerations such as digital inclusion, autonomy, and informed consent.

Rural–urban disparities remain a critical ethical concern (Hanifa & Cahaya, 2016). Many health facilities outside major cities lack the digital infrastructure required for secure EMR adoption (Amalia et al., 2021; Booth et al., 2019; Sebastian, 2024). As a result, the benefits of digital health transformation accrue disproportionately to urban populations, echoing Rawls's (1971) concern that structural inequalities perpetuate injustice when institutions fail to compensate for disadvantage.

Informed consent procedures within the EMR ecosystem also present challenges. While UU PDP mandates explicit consent for data processing, most health service providers treat consent as an administrative formality rather than a substantive ethical dialogue. This instrumentalization of consent undermines the ethical spirit of patient autonomy and transparency advocated by the WHO's *Ethics and Governance of Artificial Intelligence for Health* (2021).

Finally, ethical equity is affected by the low level of digital literacy among healthcare professionals. Many practitioners remain unaware of data security protocols or ethical reporting mechanisms. These findings reveal that the ethical infrastructure lags behind legal reform, creating a gap between regulatory compliance and moral accountability.

**Institutional Legitimacy and Citizen Trust**

Institutional legitimacy constitutes the foundation of successful digital transformation (Wong et al., 2024). Drawing on Suchman's (1995) typology, Indonesia's digital governance exhibits emerging pragmatic legitimacy—citizens recognize the benefits of EMR systems such as efficiency and portability—but weak moral and cognitive legitimacy.

Public confidence in data protection remains fragile. A 2024 survey by the Ministry of Communication and Informatics found that 61% of respondents lacked trust in the government's ability to safeguard personal data. This skepticism stems from previous high-profile data breaches in public institutions, which were not followed by transparent investigations. The state's limited crisis communication undermines the perception of moral accountability.

From the perspective of legitimacy theory (Schiopoiu Burlea & Popa, 2013), the challenge is not only legal enforcement but public engagement. Legitimacy is sustained when institutions act transparently and invite participation in decision-making. However, Indonesia's digital transformation has largely been top-down, driven by ministerial directives rather than participatory governance. While public consultations occur, their influence on policy outcomes is minimal.

The findings underscore that legitimacy cannot be built solely through statutory compliance; it must be earned through performance, transparency, and communication. Until the public perceives digital governance as both effective and ethical, legitimacy deficits will constrain the sustainability of Indonesia's digital health initiatives.

**Toward a Justice-Based Digital Governance Framework**

Despite these limitations, Indonesia's digital health reforms reveal an emerging trajectory toward justice-based digital governance. The convergence of the UU PDP, EMR regulation, and *Satu Sehat Platform* reflects a national effort to align legal, ethical, and institutional dimensions. The government's inclusion of Pancasila principles and Asta Cita

Vision 2045—which emphasize fairness, inclusiveness, and human dignity—signals a shift from a purely instrumental approach to a value-driven digital transformation.

Ethically, this aligns with (Černý, 2020) information *ethics*, which calls for preserving the integrity of the informational environment (*infosphere*). By recognizing health data as a moral entity rather than merely an administrative asset, Indonesia is beginning to construct a moral narrative for digital governance. The concept of "*kedaulatan data kesehatan*" (health data sovereignty) encapsulates this evolving moral consciousness: data protection becomes not only a matter of privacy but of national dignity and welfare.

The results therefore indicate that Indonesia's path toward social justice in digital transformation depends on synchronizing law, ethics, and institutional trust. Without ethical inclusion and legitimate authority, the legal framework risks being symbolic rather than transformative.

Indonesia's experience demonstrates the tension between legal formalism and ethical governance (Larasati et al., 2024). The state's primary response to digitalization has been regulatory—issuing new laws, decrees, and guidelines. Yet, as Rawls (1971) reminds us, justice is not merely institutional compliance but fairness in outcomes. Formal law must translate into equitable access, participatory mechanisms, and respect for individual rights.

To achieve digital justice, Indonesia must move beyond proceduralism toward substantive ethics, where moral values guide technological design and policy implementation. This involves integrating ethical deliberation into policy cycles—before, during, and after technology deployment. Ethical governance requires continuous reflection: Are the systems fair? Are the most vulnerable protected? Are citizens empowered, not merely regulated?

Suchman's (1995) framework provides critical insight into Indonesia's legitimacy challenge. The study finds that pragmatic legitimacy (perceived usefulness) is growing, but moral legitimacy (perceived fairness and integrity) remains weak. To strengthen legitimacy, institutions must engage citizens not as data subjects but as moral stakeholders.

Mechanisms such as public hearings on EMR policy, citizen advisory councils, and open data protection reports could enhance participatory legitimacy. These mechanisms would align with the government's *One Data Policy* and demonstrate moral accountability. As public trust grows, cognitive legitimacy, the normalization of digital governance as part of everyday life—will follow.

Finally, this discussion situates Indonesia's digital transformation within the broader pursuit of national resilience (*ketahanan nasional*). Digital justice contributes to societal stability by strengthening institutional credibility, protecting citizens, and aligning technological innovation with moral responsibility.

Policy integration is essential: the Ministries of Health, Communication, and Home Affairs must coordinate not only on technical interoperability but on shared ethical governance. The establishment of a National Digital Justice Task Force could ensure continuous monitoring, ethical auditing, and citizen engagement in digital policy.

In the long term, embedding justice into Indonesia's digital transformation will reinforce the legitimacy of public institutions and demonstrate that technological modernization can coexist with moral modernization.

## CONCLUSION

Indonesia's digital transformation of healthcare, embodied in the *Satu Sehat Platform* and underpinned by Law No. 27/2022 on Personal Data Protection (UU PDP) and Minister of Health Regulation No. 24/2022 on Electronic Medical Records, marks a historic step toward integrating technology into national welfare policy. Yet this study finds that the transition remains legally ambitious but ethically and institutionally incomplete. The research

demonstrates that justice in digital transformation is achieved not through legislation alone but through the moral coherence of the systems that govern it.

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