

Implications of Personal Data Protection Law in Consumer Health Data Management to Improve Secure and Confidential Handling in Indonesia

Yuyut Prayuti

Faculty of Law, Universitas Islam Nusantara, Bandung, Indonesia
yuyut.prayuti@uninus.ac.id

Abstract

The purpose of this study is to understand the impact of the implementation of the Personal Data Protection Law (PDP Law) on the management of consumer health data in Indonesia, with a focus on enhancing secure and confidential handling. In the midst of the rapidly evolving digitalisation era, the management of personal data, especially those related to health information, requires strict and effective legal regulation. This is becoming increasingly urgent given the increasing incidents of data leaks and privacy violations, one of which occurred in the leak of the Indonesian Ministry of Health's server which collected 6 million patient medical record data. The research method used is normative juridical with a conceptual approach and a statutory approach, where secondary data is broken down into three different types of legal materials, namely primary, secondary, and tertiary legal materials. The PDP Law and Consumer Protection Law are the primary legal sources, accompanied by the use of relevant literature as secondary legal sources as well as dictionaries and encyclopedias as tertiary legal materials to further explain. The novelty of this research lies in the comprehensive analysis of the existing regulations and their applicability in the health context, as well as considering the increasing public awareness of their rights to personal data. The results show that although challenges such as uneven technological infrastructure and lack of awareness among health staff still exist, the measures taken through the PDP Law have created a strong foundation for better health data protection in the future, improving security and confidentiality in health data management.

Keywords: *Consumer Protection; Health Services; Personal Data*

1. INTRODUCTION

In the era of rapidly growing digitalization, the management of personal data, especially those related to health information, is a serious concern that requires strict and effective legal regulation. In the Indonesian context, the need to ensure the security and confidentiality of consumer health data as part of Consumer Protection is becoming increasingly urgent along with the increasing incidence of data leakage and privacy violations. The implementation of the Personal Data Protection Act (PDP Law), enacted in 2022, marks an important step in efforts to improve the protection of consumers' personal data. The Act is specifically designed to address data protection needs in various sectors, with a particular focus on health data due to its highly personal and sensitive nature.

Indonesia, with a population of more than 270 million, faces unique challenges in effectively managing health data. According to data from the Indonesian Ministry of Health, more than 75% of hospitals in Indonesia will adopt electronic medical record systems by 2023, indicating a massive transition from manual to digital systems. The Indonesian Ministry of Health's data on data breach cases in healthcare facilities increased in 2022, indicating weaknesses in existing data security practices and underscoring the need for more effective law enforcement. Because,

if this continues to increase, it not only harms patients in terms of privacy, but also poses serious risks to financial identity and public trust in healthcare institutions.

The regulations represented by the PDP Act provide a comprehensive framework for data protection, outlining the responsibilities of data controllers and processors to implement strict data security principles. Article 21 of the PDP Law emphasizes that any collection, processing and storage of data must be carried out with the explicit consent of the data subject, and must be accompanied by adequate security and confidentiality to prevent unauthorized access or leakage of information.¹

Related to the implementation of the Personal Data Protection Law (PDP Law) in health services to protect consumers safely and confidentially, there are several studies that have components that are relevant to this study. *First*, Kurnianingrum's (2020), The results of this study show a significant lack of legal protection of consumers' personal data in Indonesia, caused by the lack of specific and comprehensive regulations and lack of awareness and knowledge among both consumers and service providers.² Kurnianingrum stressed the need for a specific law regulating the protection of personal data, which will not only enhance data security but also strengthen public trust in the digital ecosystem.

Second, research by Budiyaniti and Herlambang (2021) The results showed that online health consultation services offer many benefits such as convenience, lower costs, and wider access, which is very valuable especially in a pandemic situation.³ However, in particular, the lack of specific regulations in Indonesia to regulate online health consultation services raises questions about the effectiveness of services and the protection of patients in data security and public safety.

Third, research by Tambunan and Nasution (2023), This research successfully highlights that although there are various regulations such as the Electronic Information and Transaction Law (ITE Law) and Government Regulations on Electronic System Transactions designed to protect consumers, there are still substantial concerns regarding the security and privacy of consumer data.⁴ However, this study lacks an in-depth analysis of the effectiveness of such regulation in practice. In addition, the study also lacks exploring solutions to improve regulatory compliance and ways to educate consumers about their rights regarding personal data protection.

It should be recognised that there have been legal analyses of technical aspects, albeit with a limited scope. The difference, then, lies in a more comprehensive study that combines the

¹ Pemerintah Indonesia, "Undang-Undang Perlindungan Data Pribadi (UU PDP)" (Jakarta, 2022).

² trias Palupi Kurnianingrum, "Urgensi Pelindungan Data Pribadi Konsumen Di Era Ekonomi Digital," April 16, 2023, <https://doi.org/10.22212/kajian.v25i3.3893>.

³ Rani Tiyas Budiyaniti and Penggalih Mahardika Herlambang, "Perlindungan Hukum Pasien Dalam Layanan Konsultasi Kesehatan Online," *Jurnal Hukum Kesehatan Indonesia* 1, no. 01 (April 18, 2021): 1–10, <https://doi.org/10.53337/jhki.v1i01.1>.

⁴ Sagdiyah Tambunan and Muhammad I Nasution, "Perlindungan Hukum Terhadap Data Pribadi Konsumen Dalam Melakukan Transaksi Di E-Commerce," *Jurnal Ekonomi Manajemen Dan Bisnis (JEMB)* 2, no. 1 (Desember 2023): 5–7, <https://doi.org/10.47233/jemb.v2i1.915>.

integration of legal, technical and behavioural aspects in one comprehensive analytical framework. That is, this study focuses on an in-depth analysis of the regulations of the Personal Data Protection Law (PDP Law) and the Consumer Protection Law in relation to the security of confidential health consumer data. It highlights progress and areas that still require improvement.

This research focuses on at least two main issues, namely, *First*, how the Personal Data Protection Law (PDP Law) has affected consumer health data management practices in Indonesia since its enactment. *Second*, what are the main challenges of healthcare in complying with the Personal Data Protection Act (PDP Law) to meet safe and confidential consumer protection.

This study seeks to answer these questions and explore the effectiveness of the PDP Law in the context of improving health data security and confidentiality. Thus, this study aims to investigate the impact generated by the Personal Data Protection Law (PDP Law) on health data management practices in Indonesia since the law came into force. Since the implementation of the PDP Law, healthcare facilities in Indonesia have undergone a number of changes in the way they manage health data, with an emphasis on improving data security and confidentiality.

2. METHOD

In this study, the method used is normative juridical with a focus on conceptual and statutory approaches. The conceptual approach aims to build a deep understanding of existing legal concepts and the way they interact in specific legal practices. While the statutory approach is intended to understand and analyse the legal framework that has been established by applicable laws related to personal data protection and consumer protection. Studied and elaborated in a qualitative descriptive manner to explain and analyze various related legal aspects.⁵ The data applied in this study are secondary and divided into three categories of legal materials.⁶ The primary legal material consisting of the Personal Data Protection Law (PDP Law) and the Consumer Protection Law (PK Law) is the main foundation in this analysis. Furthermore, secondary legal material which includes publications such as books, journals, and relevant articles is used to support further analysis of the primary legal material. Finally, tertiary legal material, which includes sources such as dictionaries and encyclopedias, is applied to explain and provide context to the secondary legal material used in this study. Thus, this study integrates and evaluates various legal sources to build a comprehensive understanding of the implications and application of the Personal Data Protection Law (UU PDP) and the Consumer Protection Law (UU PK) in the context of applicable law.

⁵ Zainuddin Ali, *Metode Penelitian Hukum* (Jakarta: Sinar Grafika, 2021).

⁶ Nanda Rizkia and Hardi Fardiansyah, *Metode Penelitian Hukum (Normatif Dan Empiris)*, (Bandung: Widina Media Utama, 2023).

3. RESULTS AND DISCUSSION

3.1 The Effect of the Personal Data Protection Law (PDP Law) on Consumer Health Data Management Practices in Indonesia

Law Number 27 of 2022 concerning Personal Data Protection (PDP Law) is designed to provide comprehensive protection of consumers' personal data, including health data that has a very sensitive and personal nature. The introduction of the Personal Data Protection Law in Indonesia becomes critical in ensuring that health data management systems are not only technologically advanced but also secure and respectful of privacy.⁷ This law was created with the main purpose of ensuring that all personal data, especially those related to health, are kept strictly confidential.⁸ This health data not only includes basic medical information but also extends to medical history, diagnosis results, and biometric data, all of which have very high value and great risk if misused.⁹

In response to this need, the PDP Law and other relevant regulations such as Government Regulation on Health Data Operationalization (PP No. 46/2023) and ISO (International Organization for Standardization)/IEC (International Electrotechnical Commission) 27001 standard on information security have been adopted to strengthen health data security.¹⁰ The existence of this regulation requires each healthcare provider to audit and certify their information security management system periodically, ensuring that adequate precautions are taken to protect health data.

Furthermore, the PDP Law regulates in detail the rights of individuals to their personal data. This includes the right to be informed about the use of their data, the right to access that data, and the right to rectify or request deletion of the data if necessary. In addition, the law establishes clear obligations for data controllers and processors, who must take adequate technical and organizational measures to protect data from leakage or misuse. This includes the obligation to implement strict security policies and ensure that all employees or third parties accessing personal data comply with established security protocols.

The enactment of the Personal Data Protection Law further emphasizes the necessity to safeguard consumer health data.¹¹ The PDP Law also confirms the existence of administrative

⁷ Nabeel Mahdi Althabhwani, Zinatul Ashiqin Zainol, and Parviz Bagheri, "Society 5.0: A New Challenge to Legal Norms," *Sriwijaya Law Review* 6, no. 1 (January 31, 2022): 41, <https://doi.org/10.28946/slrev.Vol6.Iss1.1415.pp41-54>.

⁸ Yusuf Daeng et al., "Perlindungan Data Pribadi Dalam Era Digital: Tinjauan Terhadap Kerangka Hukum Perlindungan Privasi," *Innovative: Journal Of Social Science Research* 3, no. 6 (November 30, 2023): 2898–2905, <https://doi.org/10.31004/innovative.v3i6.6662>.

⁹ Rani Tiyas Budiyanti, and Penggalih Mahardika Herlambang. "Perlindungan Hukum Pasien Dalam Layanan Konsultasi Kesehatan Online." *Jurnal Hukum Kesehatan Indonesia* 1, no. 01 (April 18, 2021): 1–10. <https://doi.org/10.53337/jhki.v1i01.1>.

¹⁰ Pemerintah Indonesia, Peraturan Pemerintah No. 46/2023 Tentang Operasionalisasi Data Kesehatan," LN 2023 (119), TLN (6891): 14 hlm.; jdih.setneg.go.id. Jakarta, 2023.

¹¹ Isroqunnajah, Agus Iqbal Hawabi, and Umdatul Khoirot, "Legal Capacity and Legal Authority of Adult Age in Indonesia: Medical, Psychological and Islamic Law Perspectives," *Samarah: Jurnal Hukum Keluarga Dan Hukum Islam* 8, no. 1 (January 20, 2024): 105–25, <https://doi.org/10.22373/sjhk.v8i1.19834>.

and criminal sanctions for anyone who violates the stipulated provisions. These sanctions will hopefully serve as an effective deterrent against misuse or improper management of personal data, particularly health data which if leaked or misused could have serious consequences for individual privacy and well-being.¹² In Indonesia, the recent Personal Data Protection Law bolsters consumer confidence in the health sector by enforcing stricter controls over the collection, processing, and storage of health data, ensuring that consumer health information is handled securely and confidentially.¹³

Since its implementation, the PDP Law has encouraged healthcare providers to adopt stricter standards in the management and protection of personal data, which not only improves data security but also strengthens patient trust in medical institutions. However, challenges such as limited technology infrastructure, lack of data security-related awareness and training among staff, as well as high costs to comply with regulatory standards, have become major obstacles. To address these challenges and achieve secure and confidential data management, collaborative efforts between governments, health institutions, and information technology are needed that include increased investment in technology infrastructure, ongoing training programs for health staff, and the implementation of policies that are more transparent and responsive to patient needs.

Therefore, with this regulation, the government places high and firm standards to protect health data and promote better security practices among health institutions and related service providers. The impact of the implementation of the PDP Law can be seen through several main aspects, namely increased compliance with data security standards, changes in data collection and processing procedures, and more effective law enforcement.¹⁴

3.1.1 Enhanced Compliance with Data Security Standards

Since the enactment of the PDP Law, there has been a significant increase in compliance with data security standards in various health facilities. Article 20 of the PDP Law requires every data controller to ensure the security of personal data through the application of security principles which include encryption, double authentication, and regular audits of the systems used.¹⁵ The Ministry of Health of the Republic of Indonesia, through the Minister of Health Regulation

¹² Sagdiyah Fitri Andani Tambunan Agung and Muhammad Irwan Padli Nasution, "Perlindungan Hukum Terhadap Data Pribadi Konsumen Dalam Melakukan Transaksi Di E-Commerce," *Jurnal Ekonomi Manajemen dan Bisnis (JEMB)* 2, no. 1 (July 1, 2023): 5–7, <https://doi.org/10.47233/jemb.v2i1.915>.

¹³ Egute Matthew Amandong, "Alternative Dispute Resolution (ADR) Hybrid in Cameroon as a Form of Legal Protection for Consumers of Defective Products," *Brawijaya Law Journal* 8, no. 1 (April 30, 2021): 54–69, <https://doi.org/10.21776/ub.blj.2021.008.01.04>.

¹⁴ Al Sentot Sudarwanto and Dona Budi Budi Kharisma, "Comparative Study of Personal Data Protection Regulations in Indonesia, Hong Kong and Malaysia," *Journal of Financial Crime* 29, no. 4 (September 30, 2022): 1443–57, <https://doi.org/10.1108/JFC-09-2021-0193>.

¹⁵ Raden Ani Eko Wahyuni and Darminto Hartono, "Implementation Of Legal Protection By The Government In Order To Empowerment Of Micro Small Medium Enterprise To Realize The Justice Economy (Research Study: The Office of Cooperative and Micro Small and Medium Enterprise Province of Central Java)," *Diponegoro Law Review* 4, no. 1 (April 30, 2019): 388, <https://doi.org/10.14710/dilrev.4.1.2019.388-396>.

Number 24 of 2022 concerning Electronic Health Data Management, requires all health facilities to implement an electronic medical record system that is safe and in accordance with international standards.

The PDP Law requires data controllers and processors to implement adequate security measures to protect personal data from unauthorized access, leakage, or misuse. Article 21 of the PDP Law confirms that any collection, processing and storage of data must be carried out with the explicit consent of the data subject and must be accompanied by adequate security and confidentiality.¹⁶ The implementation of data encryption, two-factor authentication, and periodic security audits are some of the steps taken by healthcare facilities to comply with this provision.

The theory of legal protection proposed by Philipus M. Hadjon, states that legal protection for individuals is a right that must be given by the state to protect basic human rights, including the right to privacy and protection of personal data. In this context, the PDP Law serves as a legal instrument to protect individuals' right to privacy over their health data.¹⁷

John Locke's social contract theory states that humans voluntarily surrender some of their rights to the state in exchange for guaranteed protection of fundamental rights, including life, liberty and property. In the modern context, the right to privacy and personal data can be considered as part of these fundamental rights. When individuals provide their personal data to health institutions, they implicitly sign a 'social contract' in which the state and the institution are obliged to maintain the privacy and security of their data.¹⁸

The PDP Law, within the framework of Locke's social contract, serves as a manifestation of the state's promise to protect the personal data of its citizens. The state, through law, ensures that any data voluntarily provided by individuals is protected from external threats, such as leakage or misuse. On the other hand, individuals who submit such data have an expectation that the security of their data will be guaranteed by the health facility through the implementation of strict protection measures.

Locke also emphasised that the state must guarantee the protection of individual rights in a balanced manner. If the state or institutions fail to protect personal data, as in the case of data leaks, this can be considered a violation of the agreed social contract. As such, the PDP Law provides a legal basis for individuals to demand remedies when their privacy rights are violated, while also ensuring that governments and data controllers are held accountable for such violations.

¹⁶ Siti Yuniarti, "Perlindungan Hukum Data Pribadi Di Indonesia," *Business Economic, Communication, and Social Sciences (BECOSS) Journal* 1, no. 1 (September 30, 2019): 147–54, <https://doi.org/10.21512/becossjournal.v1i1.6030>.

¹⁷ Muhtar et al., *Teori & Hukum Konstitusi* (Jambi: Sonpedia Publishing Indonesia, 2023)

¹⁸ Moehler, Michael, and John Thrasher (eds), *New Approaches to Social Contract Theory: Liberty, Equality, Diversity, and the Open Society* (Oxford, 2024; online edn, Oxford Academic, 30 Apr. 2024), <https://doi.org/10.1093/oso/9780198878650.001.0001>, accessed 3 Oct. 2024.

It can be seen that UU PDP not only functions as a legal tool to protect personal data, but also as a manifestation of the protection of basic human rights (Hadjon) and the promise of the state in the social contract (Locke).¹⁹ UU PDP provides a foundation for individuals to feel secure that their personal data is protected in accordance with the principles of legal protection. On the other hand, the state is obliged to ensure that institutions that manage data, such as healthcare facilities, adhere to strict security standards.

In practice, measures such as encryption, security audits, and two-factor authentication are not just forms of technical obligation, but concrete manifestations of the state's promise in the social contract to protect the rights of its citizens. If data controllers fail to fulfil these obligations, they not only violate the PDP Law, but also violate the legal protections promised by the state as well as the social contract agreed upon by society.

In the context of strengthening the PDP Law, it is important to emphasise that the state must tighten supervision and apply sanctions against data breaches. As part of the legal protection described by Hadjon, individuals should have easy access to report breaches and seek redress. In addition, the state should also ensure that technological infrastructure in institutions that store sensitive data, such as healthcare facilities, is regularly strengthened to prevent further leaks.

3.1.2 Changes in Data Collection and Processing Procedures

The PDP Law has fundamentally changed the procedure for collecting and processing health data in Indonesia. Article 22 of the PDP Law provides that the collection of personal data must be based on the clear and informed consent of the data subject.²⁰ This consent must be obtained before the data is collected and must include information regarding the purpose for which it was collected, the types of data collected, and who will access the data. This process ensures transparency and gives individuals control over their personal data.

This procedure includes providing patients with clear information about how their data will be used, who will access it, and what security measures will be taken to protect the data. In addition, patients are also given the right to access, correct, and delete their personal data in accordance with applicable regulations. This increased transparency not only strengthens data protection but also increases patient trust in healthcare institutions.

Government Regulation Number 71 of 2019 concerning the Implementation of Electronic Systems and Transactions also strengthens this provision by requiring healthcare providers to

¹⁹ Stephen Chadwick, "The Social Contract of Hobbes, Locke, Rousseau and Kant," in *Social Contract Theory and International Relations: From Hobbes to Kant*, ed. Stephen Chadwick (Cham: Springer International Publishing, 2024), 3–32, https://doi.org/10.1007/978-3-031-64221-0_2.

²⁰ Tambunan and Nasution, "Perlindungan Hukum Terhadap Data Pribadi Konsumen Dalam Melakukan Transaksi Di E-Commerce."

provide clear and comprehensive information to patients regarding their rights regarding personal data.²¹

The theory of the social contract proposed by John Locke, in which individuals give their consent as part of a social contract with a government or institution, in the hope that their rights will be protected.²² In the context of the collection and processing of health data, the consent of individuals reflects this agreement, whereby they entrust their personal data to healthcare providers with assurances that it will be managed securely and in accordance with the law.

According to Dr. Ir. Bambang Permadi Soemantri Brodjonegoro, M.Sc., a Professor of the University of Indonesia mentioned that, "Changes in data collection and processing procedures regulated by the PDP Law encourage health institutions to be more transparent and responsible in managing patient data. This is a step forward in creating a safer and more secure environment for health data privacy in Indonesia".

3.1.3 More Effective Law Enforcement

The PDP Law gives greater authority to authorities to enforce laws related to personal data protection. Article 58 of the PDP Law stipulates the establishment of a Personal Data Protection Commission responsible for overseeing compliance with this Act and cracking down on violations that occur. Administrative sanctions in the form of fines and revocation of operating licenses, as well as criminal sanctions for serious violations such as data theft and misuse of data, have been implemented to provide a deterrent effect.²³

One of the most important impacts of the PDP Act is the increased effectiveness of law enforcement in data breach cases. Prior to this law, many data leak incidents were not taken seriously, resulting in huge losses for individuals whose data was leaked. However, with the PDP Act, any data breach incident must be reported to the Personal Data Protection Commission within 72 hours of detection.

The Ministry of Health's server data leak case in 2022, where personal and medical data from more than 6 million patients was leaked and sold on the internet. The MOH data leak involved millions of personal data belonging to Indonesian citizens stored on health servers. These data are rumoured to be scattered across online platforms, including medical records, personal information, and COVID-19-related data. In addition, there are reports that the data is being traded on dark web forums, raising concerns about misuse of the data for illegal purposes such as identity theft or fraud. This is a clear example of the challenges faced in managing health data.²⁴

²¹ Pemerintah Indonesia. Peraturan Pemerintah (PP) Nomor 71 Tahun 2019 tentang Penyelenggaraan Sistem dan Transaksi Elektronik" LN.2019/NO.185, TLN NO.6400, JDIH.SETNEG.GO.ID. Jakarta, 2016

²² Bernard Nainggolan, *Teori Hukum* (Yogyakarta: Publika Global Media, 2024).

²³ Sudarwanto and Kharisma, "Comparative Study of Personal Data Protection Regulations in Indonesia, Hong Kong and Malaysia."

²⁴ Wahyunanda Kusuma Pertiwi, and Nistanto, Reska K. "Data 6 Juta Pasien di Server Kemenkes Diduga Bocor, Ini Kata Kominfo." Kompas.com, January 7, 2022. <https://tekno.kompas.com/read/2022/01/07/07020037/data-6-juta-pasien-di-server-kemenkes-diduga-bocor-ini-kata-kominfo>.

The incident triggered a swift response from the relevant authorities, with a thorough investigation and strict imposition of sanctions against those responsible. This effective enforcement sends a strong message that data breaches will not be tolerated and personal data protection is a top priority.

In this context, the theory of *general deterrence* in criminal law, which states that severe punishment for violations of the law will prevent other individuals from committing similar offenses, becomes relevant. With the implementation of strict sanctions, it is expected to create a significant preventive effect so that violations of personal data protection can be minimized.

A Professor of International Law at the Faculty of Law, University of Indonesia, Prof. Dr. Hikmahanto Juwana, S.H., LL.M., Ph.D., stated that "Effective law enforcement is a key component in personal data protection. With clear sanctions and strict supervision, the PDP Law can provide optimal protection for health data and increase public trust in the legal system in Indonesia."

Thus, the Personal Data Protection Law (UU PDP) has brought significant changes in the practice of managing health data in Indonesia. Increased compliance with data security standards, changes in data collection and processing procedures, and more effective law enforcement are some of the key aspects that show the positive impact of implementing this law. This initiative encourages healthcare facilities to update their policies and integrate stricter data security systems, which not only meet local but also international standards.

Although the PDP Act has strengthened the foundations of data protection, challenges remain, such as uneven technology infrastructure and lack of awareness among health staff about the importance of data protection. In some areas, especially outside of large urban centers, healthcare facilities often lack the resources to implement effective data security systems. This demands special attention from the government and relevant institutions to increase investment in infrastructure and training.

The measures taken through the PDP Act have created a solid foundation for better health data protection in the future. With an updated framework and an emphasis on compliance, Indonesia is on track to increase public trust in its health system. However, achieving optimal data security requires greater cooperation between governments, healthcare providers, and the public. Continuous improvements to policies and practices, accompanied by increased education and resources, will strengthen health data protection networks across countries, ensuring that every citizen can enjoy a high level of privacy and security in healthcare.

Indonesia's Personal Data Protection Law (PDP Law) provides an important legal foundation for protecting consumer data, but its implementation still requires concrete steps to ensure its effectiveness. First, data controllers should immediately strengthen security systems by adopting encryption and multi-factor protection technologies to prevent unauthorised access to consumer data. Second, companies and government agencies should conduct regular training on data

security and legal obligations for their staff to ensure better compliance with the PDP Law. Third, there is a need for increased transparency in reporting data breach incidents, where companies should provide prompt notification to affected consumers, including recovery and risk mitigation plans. In addition, the government should ensure that there is a strict law enforcement mechanism with clear sanctions against violators to create a deterrent effect. Finally, collaboration between the public and private sectors in building public awareness on the importance of protecting personal data should also be prioritised, so that consumers are more vigilant in managing and sharing their personal information in this digital era.

3.2 Key Challenges of Health Services in complying with the PDP Law in meet Secure and Confidential Consumer Protection

Within the framework of consumer protection in Indonesia, the challenges faced by the health sector in complying with the Personal Data Protection Law (UU PDP) are closely related to the principles stated in the Consumer Protection Law No. 8 of 1999.²⁵ This law affirms the right of every consumer to comfort, security, and safety in using goods and services, which are explicitly included in health services. In this context, patients' personal data, as part of healthcare, must be managed not only to comply with the PDP Law, but also to provide maximum protection of patient privacy and security. This data management must be done in a way that strengthens consumer protection from any form of breach that can negatively impact, not only their privacy, but also financial and psychological losses.²⁶

A major challenge in complying with the Personal Data Protection Law (PDP Law) in the healthcare sector relates to the management of patient data, which is often sensitive and confidential. In the healthcare system, digital medical records are becoming a standard that aids in patient care. However, unauthorised access and leakage of patient data pose a serious threat. For example, according to a report from the National Cyber and Crypto Agency (BSSN), by 2022, Indonesia will experience an increase in patient data leakage cases in several hospitals, resulting in patients' personal data being leaked and sold on the black market.²⁷ Cases like this show that many healthcare facilities still do not have adequate security systems to protect patients' personal data.

In addition to the threat of data leakage, another challenge is how healthcare services can ensure that only authorised parties have access to patient data. The process of separating access rights between various medical staff, such as doctors, nurses, and administration, is often not clearly organised, increasing the risk of unnecessary data access. In a case study from a hospital in

²⁵ Aditya Wardhana, *Perilaku Konsumen Di Era Digital Penerbit Cv.Eureka Media Aksara* (Purbalingga: CV. Eurika Media Aksara, 2024).

²⁶ Sulasi Rongiyati, "Pelindungan Konsumen dalam Transaksi Dagang Melalui Sistem Elektronik (Consumer Protection in E-Commerce)," *Negara Hukum: Membangun Hukum untuk Keadilan dan Kesejahteraan* 10, no. 1 (September 2, 2019): 1–25, <https://doi.org/10.22212/jnh.v10i1.1223>.

²⁷ Leski Rizkinaswara, "Tantangan Pelindungan Data Pribadi Di Sektor Kesehatan," *Ditjen Aptika* (blog), June 27, 2020, <https://aptika.kominfo.go.id/2020/06/tantangan-pelindungan-data-pribadi-di-sektor-kesehatan/>.

Jakarta, it was found that 20% of data access breaches were caused by negligent staff who did not understand the importance of access restrictions. This demonstrates the importance of regular training for healthcare staff in understanding the PDP Law as well as the implementation of technology that can restrict access according to their respective roles.

Another challenge often faced by healthcare services is the integration of adequate technology to comply with the PDP Law. Many healthcare facilities in Indonesia, especially in remote areas, still use manual systems or have fragmented digital systems, making it difficult to monitor and ensure compliance with data security standards. A study conducted by the Ministry of Health in 2023 showed that only 45% of Indonesian hospitals have integrated medical record systems that meet personal data protection standards, while the rest are still struggling to upgrade their technological infrastructure.

Overall, in order to comply with the PDP Law and provide safe protection for consumers, healthcare in Indonesia must face major challenges in strengthening data security, limiting unauthorised access, and ensuring that the technology used is capable of protecting patients' personal information. Without improved technology infrastructure, better training of human resources, and strict policies, the risk of data breaches in the healthcare sector will continue to rise, which could harm consumers and undermine trust in healthcare.

The link between the PDP Law and the Consumer Protection Act is critical, especially when it is considered that data breaches can have serious consequences. Increasing compliance with data security standards set by the PDP Law is, therefore, an essential step in fulfilling commitments to consumer protection.²⁸ According to Prof. Dr. Anita Layarda, this comprehensive and integrated approach to legal compliance not only reduces the risk of data breaches but also strengthens consumer trust in the health system. Thus, a structured policy, which integrates the provisions of the PDP Law with consumer protection principles, ensures that consumer rights are protected and any violations are dealt with firmly and fairly.²⁹

As a fundamental human right, the privacy and security of personal information, particularly health data, challenge existing legal frameworks, pushing them toward more comprehensive and nuanced applications.³⁰ This law marks a critical advancement in the legal protection of personal data, mirroring global shifts towards securing confidential health information as a cornerstone of consumer rights.³¹ Within this framework, the implications extend beyond mere compliance;

²⁸ Agung and Nasution, "Perlindungan Hukum Terhadap Data Pribadi Konsumen Dalam Melakukan Transaksi Di E-Commerce," *Jurnal Ekonomi Manajemen dan Bisnis (JEMB)* 2, no.1 (2023):5-7, <https://doi.org/10.47233/jemb.v2i1.915>

²⁹ Kadek Rima Anggen Suari and I Made Sarjana, "Menjaga Privasi di Era Digital: Perlindungan Data Pribadi di Indonesia," *Jurnal Analisis Hukum* 6, no. 1 (April 25, 2023): 132–42, <https://doi.org/10.38043/jah.v6i1.4484>.

³⁰ Fachrurazi et al., "Revolusi Bisnis di Era Digital: Strategi dan Dampak Transformasi Proses Teknologi terhadap Keunggulan Kompetitif dan Pertumbuhan Organisasi," *Jurnal Bisnis dan Manajemen West Science* 2, no. 03 (August 29, 2023): 297–305, <https://doi.org/10.58812/jbmws.v2i03.563>.

³¹ Rina Shahriyani Shahrullah, Jihyun Park, and Irwansyah Irwansyah, "Examining Personal Data Protection Law of Indonesia and South Korea: The Privacy Rights Fulfilment," *Hasanuddin Law Review* 10, no. 1 (January 3, 2024): 1–20, <https://doi.org/10.20956/halrev.v10i1.5016>.

they reconfigure the responsibility of health data handlers and elevate the standards for privacy, aligning legal practices with the broader human rights agenda. The effective implementation of such laws not only enhances the security and confidentiality of health data management but also reaffirms the commitment to uphold human rights in digital and health sectors, thereby setting a precedent that could inspire similar legal reforms across other domains where personal data is at risk.³²

In addition, the legal theory of privacy and consumer protection developed through jurisprudence and theory by legal experts affirms the need for a consumer-oriented approach in all aspects of healthcare.³³ This approach marks a shift to more responsible and responsive systems, where compliance with security and data protection standards is seen as an integral part of healthcare ethics and not just a legal obligation. The integration between the PDP Law and the Consumer Protection Law, therefore, creates a strong foundation for safer and confidential health data management in Indonesia.³⁴ This ensures that the fulfillment of consumer rights and personal data protection is carried out synergistically and effectively, ultimately improving the quality and safety of overall health care.

This integration between the PDP Law and the Consumer Protection Law sets the foundation for healthcare providers to operate a data protection system that not only meets compliance standards but also supports the fulfillment of ethics in health services. The importance of these protections is further affirmed by the increasing number of data breach incidents³⁵, indicating an urgent need for tighter surveillance and more effective preventive measures in health data management. The role of the government is crucial in monitoring and ensuring that all health facilities comply with established regulations and continuously update their systems in line with technological advances and evolving security demands.

Technological advancements, while bringing benefits in healthcare efficiency and accessibility, also pose unique challenges when it comes to cybersecurity and data protection.³⁶ In this context, the role of consumer education and awareness cannot be ignored. Providing education to consumers about their rights and how to protect their personal data has become equally important. This includes information about how their data is collected, used, and protected as well as their right to gain control over their personal information. The enforcement of the Personal Data Protection Law in managing health data ensures that these enterprises, particularly those in the health sector, operate within a framework that prioritizes secure and confidential

³² Widodo Dwi Putro, "Human Rights and Its Contested Legal Paradigm," *Journal of Southeast Asian Human Rights* 7, no. 2 (December 31, 2023): 250–75, <https://doi.org/10.19184/jseahr.v7i2.39308>.

³³ Bernard Nainggolan. *Teori Hukum* (Yogyakarta: Publika Global Media, 2024).

³⁴ Sri Arlina and Faiz Mufidi, "Consumer Legal Protection for Whitening Cream Cosmetic Products," *Jurnal Ius Constituendum* 9, no.2 (2024): 233-250, <http://dx.doi.org/10.26623/jic.v9i2.8459>.

³⁵ Hulman Panjaitan, *Hukum Perlindungan Konsumen (Reposisi Dan Penguatan Kelembagaan Badan Penyelesaian Sengketa Konsumen Dalam Memberikan Perlindungan Dan Menjamin Keseimbangan Dengan Pelaku Usaha* (Bekasi: Jala Permata Aksara, 2023).

³⁶ Yustina Dhian Novita and Budi Santoso, "Urgensi Pembaharuan Regulasi Perlindungan Konsumen di Era Bisnis Digital," *Jurnal Pembangunan Hukum Indonesia* 3, no. 1 (January 30, 2021): 46–58, <https://doi.org/10.14710/jphi.v3i1.46-58>.

handling of consumer information.³⁷ These efforts not only increase consumer trust and satisfaction but also strengthen the integrity of the health system as a whole.

Therefore, the development of dynamic and adaptive policies to changes in the technological and legal environment is essential. Effective policymaking requires close collaboration between regulators, healthcare providers, and consumers to ensure that the policy is not only reactive but also proactive in addressing future challenges.³⁸ This will not only ensure compliance with both laws but will also help in creating a safer and more trusted healthcare environment, where every individual's personal data is protected with the highest standards of security and ethics.

In the face of the current realities of the healthcare sector, several key challenges have emerged as important focuses in the implementation of the Personal Data Protection Act (PDP Law) in conjunction with the Consumer Protection Act.

First, there are difficulties in implementing adequate technological infrastructure. Many health facilities in Indonesia, especially in remote areas, face serious obstacles in upgrading their technology systems. Outdated equipment and lack of access to the latest technological solutions cause difficulties in securing databases that store sensitive health information. For example, a small hospital in a remote area may have limited access to resources such as secure servers or up-to-date data encryption software. This creates data leakage risks that threaten not only patient privacy but also their commitment to Consumer Protection Laws that require service providers to ensure consumer security and safety.³⁹

Secondly, there are gaps in the training and awareness of health personnel regarding the importance of personal data protection. Medical and administrative staff are often ill-informed on how to effectively manage and protect data in accordance with the standards set by the PDP Act. While some facilities may have adopted the necessary technology, staff working at such facilities are often not effectively trained to use such technology securely or to understand the legal complexities relating to personal data. Without adequate understanding and adherence to security protocols, the risk of a data breach becomes higher, potentially harming both patients and institutions.

Third, bureaucratic challenges and regulatory compliance. Although the PDP Law provides a legal framework, its practical application is often hampered by convoluted bureaucratic procedures and vagueness in implementing regulations. Healthcare facilities have to deal with extensive and often conflicting layers of bureaucracy in enforcing data protection regulations. For example, the rules established by the PDP Act must be integrated with local regulations that may be pre-existing, which are not always harmonious. Healthcare facilities must allocate

³⁷ Raden Ani Eko Wahyuni, and Darminto Hartono. "Implementation Of Legal Protection By The Government In Order To Empowerment Of Micro Small Medium Enterprise To Realize The Justice Economy (Research Study: The Office of Cooperative and Micro Small and Medium Enterprise Province of Central Java)." *Diponegoro Law Review* 4, no. 1 (April 30, 2019): 388. <https://doi.org/10.14710/dilrev.4.1.2019.388-396>.

³⁸ Esther Masri, O. H. R. D. S. W., *Hukum Perlindungan Konsumen* (Jakarta: Jakad Media Publishing, 2023).

³⁹ Prayuti, Yuyut., *Hukum Perlindungan Konsumen* (Malang: CV. Madza Media, 2023).

significant time and resources to ensure that all of their compliance measures are compliant with a variety of applicable regulations, which often require extensive and costly internal policy adjustments.

Fourth, problems related to consistency and policy updates. As technology continues to evolve rapidly, policies governing the management of health data must be constantly updated to maintain their relevance. This requires health facilities to continuously monitor changes in regulations and adjust their policies periodically. This is a challenge, especially in smaller health facilities with limited resources, which may struggle to monitor all the latest legislative and technological changes. These ongoing policy updates also demand ongoing training for staff, which can be an administrative and financial burden.

According to Dr. Hendra Nurdin, a leading health law expert, the challenges faced in health data protection in Indonesia highlight the urgent need for more sustainable and effective solutions. These solutions should not only solve existing technical and compliance issues, but should also strengthen data protection ethics in clinical practice⁴⁰. This leads to an understanding that existing policies and infrastructure require updates that not only meet but also exceed the minimum standards set by relevant regulations.

In terms of improving information technology (IT) infrastructure, significant investments are required to modernize the hardware and software used by healthcare facilities. This modernization is important to ensure that health systems can protect patients' personal data from unauthorized access and other cyber threats. Investments in the latest technologies, including advanced data encryption and strong firewalls, will strengthen the security of data generated and stored by healthcare facilities.⁴¹

Moreover, the importance of training programs cannot be underestimated. Enhanced training for all healthcare staff, from IT technicians to doctors and nurses, is key to ensuring that all parties understand best practices in managing and protecting patients' personal information. The training program should cover aspects of data protection legality, use of security technology, and ethical implications of data protection. This continuing education will help create a culture of data security across the healthcare sector.

Collaboration between regulatory agencies also plays an important role in ensuring compliance with the Personal Data Protection Act (PDP) and the Consumer Protection Act. These institutions must work together to craft policies and guidelines that not only comply with existing

⁴⁰ Hasnati Hasnati and Puti Mayang Seruni, "Consumer's Personal Data Protection in the Digital Era," *Jurnal Ius Constituendum* 9, no. 1 (January 28, 2024): 20–35, <https://doi.org/10.26623/jic.v9i1.8061>.

⁴¹ Happy Yulia Anggraeni and Erna Listiawati, "Enigma Perlindungan Hak Kekayaan Intelektual Terhadap Tindakan Misappropriation Oleh Pihak Asing Dalam Regulasi Internasional," *Jurnal USM Law Review* 6, no. 1 (April 21, 2023): 174, <https://doi.org/10.26623/julr.v6i1.6710>.

regulations but also encourage innovation in the way data is managed and protected.⁴² Through this close collaboration, they can ensure that the policies implemented are the best to protect consumers and patients, while ensuring that healthcare providers have the tools and knowledge they need to comply with those standards.

By paying attention to all these aspects, an improved IT infrastructure, better training, and collaboration between Indonesian regulatory agencies can ensure that its services not only meet but also exceed the data protection and privacy standards set by law.⁴³ These measures will strengthen the ethical foundations of data protection and increase public trust in the country's health system, which in turn will promote a safer and more confidential environment for all consumers and patients, as mandated by the Personal Data Protection Act (PDP Law) and the Consumer Protection Act (PK Law).

4. CONCLUSION

In an effort to improve personal data protection, the Personal Data Protection Law (UU PDP) has been enacted in Indonesia, marking a significant progress in efforts to regulate the management of consumer health data to ensure the security and confidentiality of such information. This research has examined in depth the impact of the law on health data management practices, focusing on improving security standards and stricter data collection procedures. Although the PDP Act has successfully installed changes in data security practices among healthcare providers, challenges remain, particularly with regard to uneven technology infrastructure and differing levels of awareness among health staff, which mark the need for improved policies and practices. Based on the results of this study, it is recommended that the government and relevant institutions intensify capacity building in health facilities, especially those located in remote areas, and increase education efforts on the importance of data security. Furthermore, there needs to be an increase in supervision and enforcement to ensure more consistent and effective implementation of the PDP Law. The implications of this study are expected to serve as a reference for the development of more comprehensive health policies, which not only increase public confidence in health systems but also strengthen consumer protection frameworks in the context of health services.

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⁴² Yuyut Prayuti, "Dinamika Perlindungan Hukum Konsumen Di Era Digital: Analisis Hukum Terhadap Praktik E-Commerce Dan Perlindungan Data Konsumen Di Indonesia" *Jurnal Interpretasi Hukum*5, no. 1 (2024): 903-913, <https://doi.org/10.55637/juinhum.5.1.8482.903-913>.

⁴³ Anak Cahyani and Made Putra, "Relevansi Perlindungan Konsumen Melalui Pemulihan Regulasi Di Era Transformasi Digital," *Jurnal Kertha Wicara* 13, no. 3 (2024): hlm. 148-157, <https://doi.org/KW.2024.v13.i3.p5>.

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