Multidisciplinary Output Research For Actual and International Issue (MORFAI Journal) ISSN (e): 2808-6635
Volumes 6 No. 2 (2026)

REGULATION OF HEALTH CRISIS RISK ASSESMENT (DISASTER HEALTH) RELATED TO PRE-HEALTH CRISIS (PRE-DISASTER) STAGE MITIGATION EFFORTS FROM A HUMAN RIGHTS PERSPECTIVE

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Received	: 20 November 2025	Published	: 17 January 2026
Revised	: 01 December 2025	DOI	: https://doi.org/10.54443/morfai.v6i2.4961
Accepted	: 25 December 2025	Publish Link	: https://radjapublika.com/index.php/MORFAI/article/view/4961

Abstract

Indonesia is a country with a high level of disaster vulnerability, which has direct implications for the emergence of health crises. One important instrument in pre-disaster mitigation is the health crisis risk assessment. This study aims to analyze the regulations for health crisis risk assessments in the pre-disaster phase and formulate an ideal regulatory framework that provides legal certainty and protects human rights, particularly the right to health. The research method used is normative juridical, with a statutory and conceptual approach. The results indicate a disharmony between Minister of Health Regulation No. 75 of 2019, which requires annual risk assessments, and Head of the National Disaster Management Agency (BNPB) Regulation No. 02 of 2012, which stipulates a five-year risk assessment validity period. This disharmony has resulted in legal uncertainty and weak implementation of risk assessments at the community health center (Puskesmas) level. From a human rights perspective, this situation has the potential to hinder the fulfillment of the rights to health and the right to life. This study recommends the need for regulatory harmonization and the establishment of a risk assessment period that is adaptive, integrated, and human rights-based.

Keywords: risk assessment, health crisis, pre-disaster, human rights

INTRODUCTION

Indonesia, an archipelagic country nicknamed "a disaster-prone country," faces a high potential for natural disasters. Its geographical location between three of the world's tectonic plates (the Indo-Australian, Eurasian, and Pacific), its location in the Asia-Pacific Ring, and its proximity to the Alps and the equator make it naturally vulnerable to various disasters, such as earthquakes, tsunamis, volcanic eruptions, and flash floods. According to UNESCO, Indonesia ranks seventh among the most disaster-prone countries in the world based on geographic, geological, climatological, and demographic perspectives. On August 19, 2024, the Meteorology, Climatology, and Geophysics Agency (BMKG) reiterated its warning of the potential for major earthquakes in the Sunda Strait and Mentawai-Siberut megathrust zones. These areas experienced a seismic gap hundreds of years ago, and warrant vigilance due to the potential release of significant seismic energy.

Disasters are unpredictable events, but they can occur at any time, and their impact can be minimized through planned, measured, and sustainable mitigation and preparedness approaches. In the context of disasters, health is not only viewed as a medical issue, but also as a legal and human rights issue. This is because disasters always have implications for the fulfillment of basic rights to health, the right to life, and the right to protection from the state. Therefore, regulations regarding disaster health are crucial to provide legal certainty, guarantee human rights protection, and regulate the state's obligations in the disaster management cycle. According to Law Number 12 of 2011 concerning the Formation of Legislation, every formation of regulations must have a philosophical, sociological, and legal basis. The philosophical basis in disaster health regulations emphasizes that the protection of human dignity is a basic value that must be upheld, especially in health crisis situations that threaten the safety of life, physical integrity, and the survival of society. Health crises due to disasters, whether natural disasters, non-natural disasters, or disease outbreaks, place humans in the most vulnerable conditions, so the state is obliged to ensure the existence of a legal system that guarantees the protection of the right to life and the right to health with dignity, even in emergencies.

The sociological basis emphasizes the urgency of disaster health regulations due to the high vulnerability of Indonesian society to various types of disasters, such as earthquakes, floods, volcanic eruptions, droughts, and pandemics. This vulnerability not only impacts physical and environmental damage but also triggers complex health crises, including increased morbidity and mortality, disrupted access to health services, limited medical personnel and facilities, and the worsening conditions of vulnerable groups. Therefore, disaster health regulations are needed in response to the social reality that health crises are a direct and inseparable consequence of every disaster event. Meanwhile, the legal basis is reflected in the constitutional mandate as stipulated in Article 28H paragraph (1) and Article 34 paragraph (3) of the 1945 Constitution of the Republic of Indonesia, which guarantees citizens' rights to health services and obligates the state to be responsible for providing adequate health care facilities. In the context of disaster health, these constitutional provisions emphasize that protection from the risk of health crises is not merely a technical policy but part of the state's legal obligation to fulfill human rights.

Furthermore, Law No. 17 of 2023 concerning Health provides a strong foundation for disaster health. Article 22 explicitly stipulates that disaster health is an integral part of the national health system, while Article 109 emphasizes that disaster health management encompasses pre-disaster efforts (mitigation and preparedness), during a disaster, and post-disaster. This means that disaster health is not merely an ad hoc emergency activity, but has been positioned as part of a structured, systematic, and sustainable national framework. As an implementing regulation in the law, the government issued Minister of Health Regulation Number 75 of 2019 concerning Health Crisis Management. In this regulation, Article 9 paragraphs (3)-(5) specifically regulate mitigation and preparedness measures in the pre-health crisis stage. The mandated efforts include; (a) health crisis risk assessments to map potential threats, vulnerabilities, and capacities; (b) strengthening the health crisis information system to support data-based decision-making; (c) conducting regular disaster simulations; and (d) increasing the capacity of human resources and health service infrastructure. The integration between the norms in the law and implementing regulations shows the continuity of regulations in line with the principle of lex superior derogat legi inferiori in Law no. 12 of 2011, namely that lower regulations do not conflict with higher regulations. Thus, the norms regarding disaster health in the 2023 Health Law obtain formal and implementable legitimacy through Minister of Health Regulation No. 75 of 2019.

If examined further, in the Minister of Health Regulation No. 75 of 2019 Article 9 paragraph (3) it is emphasized that one form of preparedness in the pre-health crisis stage is the implementation of a health crisis risk study, while in paragraph (5) it is stipulated that the risk study is carried out at least 1 (one) time a year. This provision clearly emphasizes the principle of annual periodization so that the risk study is always updated to follow the health dynamics that may arise. However, this regulation has the potential to conflict with the Head of BNBP Regulation Number 02 of 2012 concerning General Guidelines for Disaster Risk Assessment, which stipulates that the results of a disaster risk assessment are valid for 5 (five) years from the date of its issuance. This means that, according to BNPB regulations, risk assessments do not have to be updated annually, but rather only once every five years, unless there are special circumstances that require revision. This difference in validity periods creates a conflict of norms. From a constitutional law perspective, this difference creates legal uncertainty for local governments and institutions on the ground. A fundamental question arises: should health risk assessments be conducted annually, as per the Minister of Health Regulation, or is the BNPB Regulation sufficient once every five years? This inconsistency can lead to policy disharmony, particularly at the implementation level, as both regulations are equally valid and originate from legitimate institutions.

If reviewed from the hierarchy of laws and regulations, based on Law Number 12 of 2011 concerning the Formation of Laws and Regulations, the position of the Law is higher than the Regulation of the Head of the Institution (Perka BNPB) and the Ministerial Regulation (Permenkes). In this context, Law Number 24 of 2007 concerning Disaster Management emphasizes that disaster management must be implemented in a planned, integrated, coordinated and comprehensive manner. Article 35 (1) of the Law also states that disaster risk assessment is an important part of disaster management planning. Thus, both the Permenkes and Perka BNPB should comply with and adapt to the provisions of Law Number 24 of 2007. The problem is that Law Number 24 of 2007 does not explicitly regulate the periodicity of disaster risk assessments, thus leaving room for different interpretations by each ministry/institution. As a result, technical regulations are produced with varying standards: the Ministry of Health emphasizes an annual period, while the National Disaster Management Agency (BNPB) stipulates a five-year period. A review of disaster risk assessment regulations in six randomly selected community health centers (Puskesmas Nusa Penida I and Abiansemal) in Bali Province, West Java (Puskesmas Cugenang and Cijedil), and North Sumatra (Puskesmas Karang Anyar and Helvetia) shows that the implementation of health crisis risk assessments in the pre-disaster phase at the primary care level lacks uniformity or solid legal standards. Each community health center has

different formats and scopes of documents, such as technical manuals, mitigation guidelines, disaster management guidelines, and health crisis Standard Operating Procedures (SOPs). This difference shows that the risk assessment regulatory system is still sectoral and has not been integrated into a uniform legal policy framework.

Table 1. Validity Period and Updates of Risk Assessment Documents for Six Community Based Forest Projects (Nusa Penida 1, Abiansemal, Karang Anyar, Helvetia, Cugenang, and Cijedil)

Puskesmas	Document Type	Year Issued	Revision Mechanism	Important Notes
Nusa Penida I	Disaster Management and Contingency Plan Guideline	2022	No limitation; revised when new policies apply	Never revised
Abiansemal	SOP for Health Crisis Prevention and Mitigation	2025	Remains valid as long as there are no policy changes	Revision has not yet been conducted
Karang Anyar	Disaster Mitigation Guideline	2023	2025–2029 (5 years)	Formally established
Helvetia	Occupational Health and Safety SOP (OHS SOP: KTB, KPC, KNC)	2023	Valid for 5 years	Revision follows accreditation quality standards (2023–2028)
Cugenang	Earthquake Mitigation Guideline	2023	Unlimited (until changes occur)	Never revised
Cijedil	Technical Guideline Book	2013	Not specified	Latest document, no revision

Interviews revealed that most community health centers (Puskesmas) already have disaster mitigation documents, but their validity period and renewal mechanisms have not been consistently regulated. Of the six community health centers studied, only Karang Anyar explicitly stipulated a formal validity period for its disaster mitigation documents (2025-2029). Meanwhile, Nusa Penida I, Cugenang, Cijedil, and Abiansemal community health centers set an indefinite validity period, with revisions to be made if policy changes occur. Helvetia community health center, which already has documents in the form of Quality Standard Operating Procedures (SOPs for KTB, KPC, and KNC), implements a five-year renewal mechanism concurrent with the health service quality accreditation cycle. This policy demonstrates awareness of the need for periodization, but its implementation remains limited to the context of accreditation, not as part of an integrated disaster risk assessment system. This situation indicates that the risk mitigation administration system at the pre-crisis level has not been fully adaptive to the dynamics of health threats and changes in national policy. Furthermore, the implementation of risk assessments in the field remains fragmented and unsustainable. Only a small number of Community Health Centers (Puskesmas), such as Nusa Penida I and Cijedil, have conducted Hazard Vulnerability Assessments (HVA) as the basis for risk mapping in their work areas, while others, including Helvetia, do not yet have a comprehensive risk mapping system. Socialization, training, and cross-sectoral coordination with the Regional Disaster Management Agency (BPBD), the Indonesian Red Cross (PMI), the Indonesian National Armed Forces (TNI/Polro), and the Health Office have

also not been carried out uniformly. Some Community Health Centers, such as Abiansemal and Helvetia, have conducted annual disaster simulations (e.g., earthquakes and fires), but their implementation remains dependent on budget availability. This irregularity indicates the lack of a systematic policy pattern for implementing pre-crisis mitigation at primary health care facilities, even though such preparedness is a crucial element of a disaster-resilient health system. From a human rights (HAM) perspective, this condition reflects the less than optimal fulfillment of the right to health as guaranteed in Article 28H paragraph (1) of the 1945 Constitution of the Republic of Indonesia and Article 12 of the International Covenant on Economic, Social and Cultural Rights (ICESCR) in Law of the Republic of Indonesia Number 11 of 2005 concerning the Ratification of the International Covenant on Economic, Social and Cultural Rights. The state has a legal obligation to respect, protect, and fulfill the right to health of every citizen, including through the implementation of an effective, adaptive, and sustainable risk mitigation system. The absence of a mechanism for regularly updating risk assessment documents has the potential to cause violations of the right to health principle, especially in the dimensions of availability, accessibility, acceptability, and quality of health services. In addition, this irregularity can also hinder the realization of the principles of non-discrimination and the right to life, because vulnerable groups such as pregnant women, the elderly, children, and people with disabilities do not receive adequate protection in emergency or disaster situations.

Normatively, the regulation of health crisis risk assessments during the pre-crisis phase should be an integral part of the human rights protection system in the health sector. Responsive risk assessments are not merely a technical managerial instrument but also a manifestation of the state's constitutional obligation to ensure public protection and safety. Therefore, legal policy reform is needed that emphasizes the obligation of every Community Health Center (Puskesmas) to maintain, update, and implement risk assessment documents periodically, for example every three to five years, in line with regional development planning cycles and national policy updates. The results of these assessments should form the basis for developing Standard Operating Procedures (SOPs), contingency plans, and cross-sector coordination mechanisms. Such legal policies should be designed in a responsive and equitable manner, taking into account variations in geographic conditions, resource capacity, and local risk levels in each Community Health Center's working area.

The above conditions highlight the importance of regulatory harmonization between the Minister of Health Regulation Number 75 of 2019 on Health Crisis Management and the Head of the National Disaster Management Agency (BNPB) Regulation Number 02 of 2012 concerning General Guidelines for Disaster Risk Assessment. Harmonization is necessary to prevent regulatory dualism that may potentially confuse local governments, healthcare workers, and disaster management personnel in the field. Key aspects that require harmonization include the periodicity and validity period of risk assessments, standardized methodologies for health crisis risk assessment, the division of authority and coordination between the health and disaster management sectors, and the integration of risk assessment results into planning documents, standard operating procedures, and contingency plans at the primary healthcare service level. Without harmonization, the implementation of risk assessments risks becoming merely an administrative formality rather than a strategic instrument for health crisis mitigation. Therefore, an in-depth review of these two regulations is essential to determine whether regulatory synchronization is required through revisions, the formulation of joint regulations, or adjustments to standards in accordance with the mandate of Law Number 24 of 2007 on Disaster Management. Based on this background, it is important to conduct research entitled "Regulation of Health Crisis Risk Assessment (Disaster Health) Related to Pre-Health Crisis (Pre-Disaster) Mitigation Efforts in the Human Rights Perspective", to critically examine the regulation of health crisis risk assessment in the context of pre-crisis mitigation from a human rights perspective, as well as to formulate responsive and just legal policy recommendations.

LITERATURE REVIEW

Theoretical Foundation

In principle, theory is a framework of thought that provides a basis for understanding a study broadly. Theory enables practitioners and academics to master the doctrines developed by experts and to assess the interrelationships between ideas more clearly and in a structured manner. Furthermore, theory serves as a justification for explaining the principles underlying a practice or implementation.

a. The Hierarchy of Norms Theory

According to Hans Kelsen, legal norms are structured in a hierarchical and layered manner within a hierarchy (Stufenbau des Rechts). Each lower norm is valid because it originates from and is based on a higher norm. This continues until a supreme norm is reached, which cannot be further traced, is hypothetical, and fictitious, called the basic norm (Grundnorm).

b. Theory of Legal Validity

In legal theory, legal validity or legitimacy is a fundamental concept that determines whether a legal norm can be considered valid, binding, and enforceable within a legal system. The existence of a legal rule is not sufficient simply to be stated in written form; it must meet certain requirements to be recognized as valid normatively, sociologically, and morally. Therefore, a discussion of legal validity is key to understanding the legitimacy and effectiveness of law in a state governed by the rule of law.

c. Theory of Legal Certainty

Theory of Legal Certainty is part of normative legal philosophy that views law as a system of rules that must provide clarity, stability, and order in society. According to Gustav Radbruch, the principle of legal certainty plays a crucial role in maintaining order and order in a state governed by the rule of law.

d. Theory of Human Rights Protection

Human rights (HAM) are fundamental rights inherent in every individual from birth as a gift from God Almighty. These rights are universal, inalienable, and must be respected by everyone, including the state. Within the modern legal framework, the protection of human rights is an important indicator of a state (rechtsstaat) and a democratic state, as the existence of human rights affirms the limits of the state's power over its citizens.

e. Principle of Legal Preference

In modern legal systems, the existence of various types of laws and regulations structured in layers and at different levels has the potential to give rise to conflicts of legal norms, namely, situations where two or more legal norms regulate the same matter but impose different legal orders or consequences. To maintain consistency and legal certainty, legal science recognizes the principle of preference, a set of principles used to determine which legal norm should take precedence in the event of a conflict between legal norms.

Research Concept

In addition to theory and principles, it is important to understand key concepts to provide a framework for legal analysis. These concepts cross scientific fields and are frequently used in the formation and interpretation of law. This research will be explained using the concepts below.

a. Concept of Disaster (Crisis)

The term disaster is often understood colloquially as an event that brings suffering, loss, or disaster to humans. In the Big Indonesian Dictionary (KBBI), a disaster is defined as something that causes and/or gives rise to hardship, loss, or suffering, accidents, and danger. This definition emphasizes the negative consequences or impacts experienced by humans when facing an event, whether originating from nature or other factors.

b. Disaster Management Concept (Health Crisis Management)

Disaster management is a series of systematic and integrated processes to reduce risks, prevent greater impacts, and accelerate recovery after a disaster. In the context of Indonesian law, the concept of disaster management is regulated in Law Number 24 of 2007 concerning Disaster Management, which emphasizes that disaster management is not limited to emergency measures during a disaster, but encompasses the entire life cycle before, during, and after a disaster. Thus, disaster management is understood as a continuous mechanism, not a partial or incidental action.

c. Concept of Health Crisis Risk Assessment or Disaster Risk Assessment

A health crisis risk assessment, often referred to as a disaster risk assessment, is a systematic process for assessing the extent to which a region or community is potentially exposed to threats that could lead to a health crisis. This assessment essentially serves to identify and understand three main elements: hazard, venerability, and the capacity of the community and health system to respond to disasters. By understanding these three aspects, the level of risk faced can be determined, which then serves as the basis for the government in formulating health crisis or disaster management policies.

d. The Concept of Human Rights in Mitigation Efforts

Human Rights (HAM) are a set of fundamental rights inherent in every individual from birth and inalienable by anyone. These rights apply universally, regardless of ethnicity, religion, gender, language, or socioeconomic status. In the context of disasters, human rights serve as a fundamental principle binding the state and all stakeholders, ensuring that all disaster management policies and actions, including those at the mitigation stage, are oriented not only toward reducing physical risks but also toward ensuring the protection of the dignity and rights of citizens.

METHOD

Type of Research

The research method used in this study is normative or doctrinal legal research. Normative legal research serves to provide legal arguments when there are gaps, ambiguities, and conflicts in norms. Furthermore, the uses of normative law are: (1) to determine or understand whether and how positive law relates to a particular issue; (2) to prepare legal documents; (3) to compile basic research in the legal field; (4) to draft legislation; and (5) to solve specific legal problems.

Legal Material Collection Techniques

Techniques for reviewing and collecting primary legal materials should be systematically identified. Systematization of legal materials can be done by:

1. Referring to the hierarchy of laws and regulations, starting with laws, implementing regulations, and, in this research, ministerial regulations.
2. Assessing whether these regulations are still valid as positive law. For research using a statute approach, it is important to ensure the validity of the regulations being studied.
3. Identify, at the statutory level, which are lex specialis (special laws) and which are legi generali (general laws). Identify which are lex preori (old laws) and which are lex posteriori (new laws), lex superior (higher laws) and which are lex inferior (lower laws). This distinction serves to enforce the validity of legal adages, ensuring which laws have the force of law in cases where the substance is the same but the situation is in conflict.

Like primary materials, secondary materials can be collected using the snowball technique. This applies to secondary sources such as law books, journals, and so on.

Analysis Techniques

Once the legal materials have been collected, they are then analyzed to obtain a final argument and also provide an answer to the legal problem being researched. There are at least four types of legal analysis techniques: description, comparison, evaluation, and argumentation.

a. Description: A basic analytical technique that cannot be avoided by its users. Description means a straightforward description of a condition or position of legal or non-legal propositions.
b. Comparison: After the description, a comparison step is carried out to compare one opinion with another.
c. Evaluation: assessing/evaluating whether a view, proposition, statement, normative formulation, or decision is correct or incorrect, whether stated in primary or secondary legal materials.
d. Argumentation: Evaluation techniques cannot be separated from this technique, as the assessment must be based on legal reasoning. In discussing a problem, the more arguments there are, the deeper the legal reasoning.

RESULTS AND DISCUSSION

Overview of Health Crisis Risk Assessment Regulations in Indonesia

1. The Position of Health Crisis Risk Assessment in the Indonesian Legal System

Health crisis risk assessments are essentially the initial foundation of all pre-health crisis mitigation efforts. Without a risk assessment, the state lacks a clear picture of the types of health threats, the level of vulnerability, and the health system's preparedness to face a crisis. Therefore, risk assessments are not merely technical or administrative activities, but rather legal and policy instruments that determine the direction of public health protection. In the Indonesian legal system, health crisis risk assessments have an implicit yet strategic position. They are not always explicitly mentioned in specific laws, but their existence is widespread and integrated into various regulations in the health and disaster sectors. This demonstrates that the state recognizes risk assessments as part of its legal responsibility to protect the health and safety of its citizens. Problems arise when risk assessment regulations fall within more than one legal regime. On the one hand, health crisis risk assessment is viewed as a health issue; on the other, it is also categorized as part of disaster management. These differing perspectives lead to inconsistent regulations, thus blurring the position of risk assessment in legal practice.

2. Risk Assessment Regulations in Law No. 17 of 2023 concerning Health

Law No. 17 of 2023 concerning Health affirms that health is a human right and a state responsibility. In the context of a health crisis, this law obliges the state to prevent, prepare for, and control health risks that could threaten the wider community. Although this law does not explicitly mention the term "health crisis risk assessment," its substance points to the government's obligation to manage health risks systematically and sustainably. This means that risk assessment is a logical prerequisite for the state to formulate appropriate health policies, including in emergency or crisis situations. As a sectoral health law, the Health Law serves as the primary legal umbrella for all health crisis mitigation policies. Therefore, all technical regulations in the health sector should refer to and not contradict this law.

3. Risk Assessment Regulations in Law No. 24 of 2007 concerning Disaster Management

Law No. 24 of 2007 regulates comprehensive disaster management, whether natural or non-natural disasters such as disease outbreaks and pandemics. This law places risk assessment as the primary foundation of the pre-disaster phase, aiming to mitigate impacts before a disaster occurs. However, this law regulates risk assessments in a general, cross-sectoral sense. It does not clearly differentiate between the characteristics of disasters in the health sector, which are characterized by rapid and complex dynamics. Consequently, this law does not provide detailed guidance on how health crisis risk assessments should be conducted, including how frequently they should be updated. This lack of technical regulations creates a regulatory vacuum, particularly when health risk assessments must be aligned with more specific health regulations.

4. Technical Regulations in Ministerial Regulation No. 75 of 2019

Ministerial Regulation No. 75 of 2019 is a technical regulation specifically governing health crisis management. This regulation mandates routine health crisis mitigation and preparedness, at least once a year. This approach reflects the highly dynamic nature of health risks. Health threats can change rapidly due to disease mutations, population mobility, or environmental changes. Therefore, annual risk assessments are considered more realistic and responsive to real-world conditions. However, as a Ministerial Regulation, this Ministerial Regulation has limitations in terms of legal hierarchy. It cannot stand alone without the support and alignment of cross-sectoral regulations, particularly disaster regulations, which also regulate risk assessments.

5. Technical Regulations in BNPB Regulation No. 02 of 2012

The Regulation of the Head of the National Disaster Management Agency (BNPB Regulation No. 02 of 2012) concerning General Guidelines for Disaster Risk Assessment essentially stipulates that the disaster risk assessment period is valid for five years. This provision serves as the basis for the preparation of disaster risk assessments as medium-term planning documents used by the central and regional governments. However, this BNPB Regulation does not preclude the possibility of updating the risk assessment within a shorter timeframe. It explicitly states that the disaster risk assessment can be reviewed periodically every two years or at any time if a disaster or extreme condition requires revision of the existing assessment. This provision demonstrates that although the risk assessment is prepared for a five-year period, the regulation still provides flexibility to adjust to evolving risk dynamics.

From a normative perspective, this regulation reflects an adaptive approach to disaster management, recognizing that disaster risks are not static. However, this flexibility is optional and conditional, not strictly mandatory, and is not strictly mandatory. Biennial or intermittent reviews are only conducted in the event of a specific disaster or extreme situation, so that under normal conditions, risk assessments can potentially remain in use for up to five years without substantial updates. In the context of a health crisis, this approach remains problematic. Health risks are highly dynamic and can change significantly without being preceded by a major disaster or visible extreme situation. Therefore, although the BNPB regulation allows for periodic reviews, this provision is not fully aligned with the needs of health crisis mitigation, which requires more routine and systematic risk updates.

6. Analysis of Normative Conflicts and Risk Assessment Periodization

With the BNPB Regulation's biennial or intermittent review requirements, the normative conflict between the BNPB Regulation and Minister of Health Regulation No. 75 of 2019 is not entirely clear-cut but is more accurately understood as a difference in regulatory approach.

The Minister of Health Regulation explicitly requires that health crisis mitigation and preparedness activities be conducted at least once a year, implicitly requiring that risk assessments be updated regularly. Meanwhile, the BNPB Regulation establishes a five-year framework with the possibility of conditional periodic reviews. This difference still creates normative inconsistencies, as the two regulations do not provide the same, clearly binding, standard periodization. From the perspective of the hierarchy of norms theory, the two regulations are at relatively equal levels and regulate the same object, namely disaster risk assessment, but from different sectoral perspectives. The principle of lex superior derogat legi inferiori cannot be directly applied. The principle of lex posterior deroget legi priori also does not resolve the issue, as the differences lie in substance, not simply in the timing of their formulation. The principle of lex specialis derogate legi generali can serve as a conceptual reference, establishing the Ministerial Regulation (Permenkes) as a special regulation in the field of health crises. However, because Disaster Management Law Number 24 of 2007 does not provide explicit provisions regarding the periodicity of health risk assessments, the application of this principle remains interpretative and does not provide strong legal certainty.

7. Impact on Legal Certainty in Pre-Health Crisis Mitigation

The flexible provisions in the BNPB Regulation do indicate an effort to adapt to the dynamics of disaster risk. However, in the practice of pre-health crisis mitigation, flexibility without periodic obligations can actually create legal uncertainty. Regional governments and health stakeholders may face a normative dilemma: whether to update risk assessments annually, as in the Ministerial Regulation, or simply rely on the five-year review, which is reviewed biennially, as in the BNPB Regulation. These differences in interpretation have the potential to result in inconsistent practices across regions. As a result, health crisis risk assessments can be prepared with varying standards and frequencies, weakening the consistency of national pre-crisis mitigation efforts. This ultimately impacts the effectiveness of protecting the right to health, as the state lacks a clear and integrated legal framework for addressing potential health crises.

Implementation of Health Crisis Risk Assessments at Community Health Centers (Puskesmas) as First-Level Healthcare Facilities

1. Community Health Centers as Strategic Subjects for Pre-Health Crisis Mitigation

Community health centers (Puskesmas) are first-level healthcare facilities (FKTP) that hold a strategic position within the national health system, particularly in the pre-health crisis mitigation phase. Their position as the health service closest to the community makes them the frontline in detecting health risks, mapping regional vulnerabilities, and preparing initial responses to potential health crises. Within the legal framework of health and disaster management, Community Health Centers function not only as providers of curative services but also have a preventive and promotive mandate. Therefore, the implementation of health crisis risk assessments at the Community Health Center level is an important indicator for assessing the extent to which established legal norms are actually implemented in practice.

2. Format of Health Crisis Risk Assessment Documents in Community Health Centers

Based on practices found in the six Community Health Centers (Puskesmas) that served as the locus for health crisis risk assessments, they were not always presented in a single, uniform, stand-alone document. Instead, risk assessments were often scattered across various administrative and technical documents, including:

1. Standard operating procedures (SOPs) for health emergency response;
2. Guidelines and technical instructions (Juknis) issued by the health office or ministry;
3. Contingency plans (Renkon) prepared to address specific emergency situations;
4. Supporting documents for Community Health Center accreditation

This diversity of document formats indicates that health crisis risk assessments are not yet understood as stand-alone legal and planning instruments, but rather are still treated as administrative elements embedded in other documents. Consequently, there is no standard format for the depth of analysis or the scope of risk assessments across Community Health Centers.

3. Uneven Format and Substance of Risk Assessments

The inconsistent format of risk assessment documents directly impacts the substance. Some community health centers (Puskesmas) only include general risk identification without vulnerability and capacity analysis, while others have attempted to develop more detailed risk mapping without a clear methodology.

This situation reflects weak operational regulatory requirements. Existing legal norms fail to ensure that health crisis risk assessments are prepared to the same minimum standards across all community health centers in Indonesia. Therefore, although the normative obligation to mitigate risks exists, its implementation is highly dependent on the institutional capacity of each community health center.

4. Periodization and Mechanism for Updating Risk Assessments

Regarding the periodization, significant differences were found between Community Health Centers (Puskesmas). For example, Karang Anyar and Helvetia Community Health Centers (Puskesmas Helvetia) prepare risk assessments using a five-year periodic approach, which is generally aligned with regional planning documents and disaster policies. In contrast, other Community Health Centers (Puskesmas) do not have a clear timeframe for updating risk assessments. Existing documents tend to stagnate and are only updated upon instruction from the health office or to fulfill accreditation requirements. This situation indicates that the risk assessment updating mechanism has not yet become a systematic internal obligation, relying on external factors. This reinforces previous findings regarding normative uncertainty regarding the periodization of health crisis risk assessments.

5. Dependence on Accreditation and Central Instructions

In practice, the preparation and updating of health crisis risk assessments at community health centers (Puskesmas) are heavily influenced by the accreditation process and instructions from the central or regional government. Risk assessments are often prepared not out of an awareness of the importance of pre-crisis mitigation, but as an administrative requirement to meet the health facility's accreditation standards. This dependence indicates that the legal validity of risk assessments is more of an administrative formality, rather than a substantive requirement understood and internalized by health service providers. As a result, risk assessments potentially lose their strategic function as a prevention and preparedness tool.

6. Risk Mapping and Preparedness at the Community Health Center Level

The implementation of health crisis risk assessments is also reflected in risk mapping and preparedness practices. The study results indicate that Health Vulnerability Assessments (HVAs) are only conducted on a limited basis and have not yet become common practice across all community health centers. Furthermore, preparedness simulations and exercises are not implemented evenly. Some community health centers have conducted health crisis management simulations, but most do not conduct them routinely and sustainably. Cross-sectoral coordination, such as with the Regional Disaster Management Agency (BPBD), village governments, or community elements, is also not systematic. This situation indicates that risk assessments have not been fully translated into concrete, planned and sustainable actions.

7. Implementation Analysis Based on the Theory of Validity and Legal Certainty

From the perspective of the theory of legal validity, the above conditions indicate that the health crisis risk assessment at the Community Health Center level has legal validity, as it is supported by various laws and regulations. However, from a social or factual perspective, its enforceability remains weak. This aligns with the view of Lawrence M. Friedman and Meuwissen that formally valid laws are not necessarily effective if they are not accepted and implemented in practice. Furthermore, based on Gustav Radbruch's theory of legal certainty, the law should provide certainty, justice, and benefit. In this context, the uneven implementation of risk assessments indicates that legal certainty has not been achieved. Legal norms have not been able to provide clear and consistent guidelines for Community Health Centers in implementing pre-health crisis mitigation. Thus, there is a clear gap between legal norms and empirical reality, ultimately weakening the function of law as an instrument for protecting public health.

Health Crisis Risk Assessment as an Instrument for Protecting Human Rights

1. The Right to Health and the Right to Life from a Human Rights Perspective

The right to health is a fundamental human right and cannot be separated from the right to life. Without adequate health protection, the right to life becomes vulnerable to violations, especially in health crisis situations such as disease outbreaks, pandemics, or the failure of health care systems due to disasters. Therefore, from a human rights perspective, health is not understood merely as a medical condition, but as a state of physical, mental, and social well-being that must be guaranteed by the state.

In the context of a health crisis, threats to public health are often massive and systemic. The risk of death, prolonged suffering, and the collapse of health services can occur if the state fails to take preventative measures from the pre-crisis stage. Therefore, health crisis risk assessment holds a strategic position as an initial instrument for protecting the right to life and the right to health.

2. Constitutional Basis: Article 28H Paragraph (1) of the 1945 Constitution of the Republic of Indonesia

Constitutionally, the right to health is guaranteed in Article 28H Paragraph (1) of the 1945 Constitution of the Republic of Indonesia, which states that everyone has the right to live in physical and spiritual prosperity, to have a home, and to receive health services. This provision positions health services as a constitutional right of citizens, not an optional policy. In this context, the state is not only obligated to provide health services when a crisis occurs, but also to prevent foreseeable health losses. Health crisis risk assessments are a constitutional tool to fulfill this obligation, because through risk assessments, the state can identify health threats early and take appropriate mitigation measures.

3. International Legal Basis: Article 12 of the ICESCR

In addition to constitutional guarantees, Indonesia is also bound by international obligations through the International Covenant on Economic, Social, and Cultural Rights (ICESCR). Article 12 of the ICESCR affirms the right of everyone to the enjoyment of the highest attainable standard of physical and mental health. The UN Committee on Economic, Social, and Cultural Rights, through General Command No. 14, affirms that the right to health includes the obligation of states to take preventive measures against diseases and conditions that threaten public health. Such prevention is impossible without a systematic, evidence-based risk assessment. Therefore, assessing health crisis risks is part of fulfilling the international human rights obligations that bind states.

4. State Obligations: To Respect, To Protect, and To Fulfill

In human rights protection theory, the state's obligations regarding the right to health are divided into three layers: to respect, to protect, and to fulfill.

The obligation to respect requires the state to refrain from actions or policies that worsen public health conditions. In this context, ignoring risk assessments or using outdated risk data can be viewed as a form of state negligence that could potentially violate the right to health. The obligation to protect requires the state to protect the public from health threats originating from third parties, such as unhealthy environments, the spread of disease, or the failure of health services. Health crisis risk assessments serve as the basis for the state to establish standards, regulations, and oversight to prevent these impacts. Meanwhile, the obligation to fulfill requires the state to take active steps, including formulating budget allocation policies and building a resilient health system. At this stage, risk assessments serve as a primary planning tool to ensure that the right to health is fulfilled in a targeted and sustainable manner.

5. Implications of Weak Risk Assessments for the AAAQ Principle

The right to health, from a human rights perspective, is measured through the principles of Availability, Accessibility, Acceptability, and Quality (AAAQ). Weak risk assessments for health crises directly impact these four aspects. First, from the Availability aspect, the lack of adequate risk assessments can result in insufficient availability of health facilities, medical personnel, and medicines during a crisis. Second, from the Accessibility aspect, the distribution of health services becomes uneven because the state lacks a clear risk map of the most vulnerable areas and community groups. Third, from the Acceptability aspect, health policies that are not based on risk assessments tend to be incompatible with the social and cultural needs of the community, making them difficult to accept and implement. Fourth, from the Quality aspect, health services have the potential to decline because the health system is not prepared to deal with a surge in demand during a crisis.

6. Impact on Vulnerable Groups

Vulnerable groups, such as the elderly, pregnant women, children, and people with disabilities, are the most impacted when health crisis risk assessments are not optimally conducted. These groups have specific health needs and a higher level of vulnerability to crises. Without risk assessments that are sensitive to social vulnerability, health policies tend to be general and fail to address the specific needs of vulnerable groups. This can lead to increased morbidity and mortality rates and widen health disparities between community groups.

7. Risk of Structural Discrimination

Weak health crisis risk assessments also open up opportunities for structural discrimination. This discrimination does not always occur directly, but emerges through policies that systematically neglect certain groups due to a lack of adequate data and risk analysis. From a human rights perspective, the state's failure to identify and mitigate health risks that specifically threaten vulnerable groups can be viewed as a violation of the principle of non-discrimination. Therefore, risk assessments serve not only as a technical tool but also as a mechanism to ensure justice and well-being in fulfilling the right to health.

Harmonization of Regulations on Health Crisis Risk Assessments as Ius Constituendum

The discussion in sub-chapter 4.1 shows that normatively, regulations on health crisis risk assessments in Indonesia remain fragmented and inconsistent, particularly between the health legal regime and the disaster legal regime. Sub-chapter 4.2 demonstrates that this disharmony directly impacts implementation at the Community Health Center (Puskesmas) level, resulting in risk assessments that are not uniform and sustainable. Furthermore, sub-chapter 4.3 emphasizes that weaknesses in the regulation and implementation of pre-health crisis risk assessments have serious implications for the fulfillment of human rights, particularly the right to health and the right to life. Based on these normative findings and human rights implications, Sub-chapter 4.4 focuses on formulating the Ius Constituendum, namely the ideal and responsive direction for legal reform to strengthen health crisis risk assessments as a just and human rights-based pre-crisis mitigation instrument.

1. Forms of Inconsistencies in the Regulations for Health Crisis Risk Assessments

Based on the analysis of sub-chapters 4.1 to 4.3, several prominent inconsistencies in the regulations for health crisis risk assessments are identified:

a. Inconsistencies in the periodization of risk assessments. Minister of Health Regulation No. 75 of 2019 encourages routine mitigation and preparedness activities at least annually, while Head of the National Disaster Management Agency Regulation No. 02 of 2012 stipulates a five-year risk assessment period with the possibility of biennial or occasional reviews.
b. The lack of uniformity in the form and substance of risk assessment documents, as evidenced by the variety of documents at the Community Health Center (Puskesmas) level, ranging from standard operating procedures (SOPs) and contingency plans to internal documents lacking national standards.
c. The lack of integration of institutional authority, particularly between the Ministry of Health and the National Disaster Management Agency (BNPB), has led to regulatory dualism and weak cross-sectoral coordination.
d. The absence of national standards for health crisis risk assessments, including methodology, indicators, and data update mechanisms.
e. The lack of norms in Law Number 24 of 2007, which does not explicitly regulate health crisis risk assessments as an integral part of disaster mitigation.

This lack of alignment cumulatively creates legal uncertainty and weakens the effectiveness of pre-health crisis mitigation.

2. Weaknesses of Current Regulations from a Legal Certainty Theory Perspective

In the theory of legal certainty, regulations must be formulated clearly, consistently, and predictably implemented. However, current regulations for health crisis risk assessments do not meet these principles. The lack of a national standard for periodization causes each institution to interpret the risk assessment obligation differently, resulting in inconsistent legal enforcement. Furthermore, the lack of integration between the Ministry of Health and the National Disaster Management Agency (BNPB) reinforces policy fragmentation. This is despite the dual nature of health crises as both public health and disaster issues. Without normative integration, the law loses its social and factual binding force, as Meuwissen argues, stating that legal validity is determined not only by formal validity but also by its effectiveness and social acceptance.

3. Ideal Regulatory Model for Health Crisis Risk Assessment

As a legal framework, the regulation of health crisis risk assessments needs to be guided by a harmonious, adaptive, and risk-based model. First, in terms of periodicity, risk assessments should ideally be prepared for a period of three to five years, with the flexibility to adjust based on the level of risk and the dynamics of health threats.

Second, annual risk assessments should not be prepared as new documents, but rather as updates to the indicator data and risk scenarios in the master document. This model aligns with the WHO's recommended risk-informed planning approach to health emergency risk management.

Third, risk assessments must be functionally integrated into:

- Health service standard operating procedures (SOPs),
- Health crisis contingency plans, and
- Regional development planning documents (RPJMD and RKPD).

This integration will ensure that risk assessments are not merely administrative documents but serve as the operational basis for decision-making.

4. Necessary Forms of Regulatory Harmonization

Harmonization of health crisis risk assessment regulations can be achieved through several legal instruments. First, a revision of Minister of Health Regulation No. 75 of 2019 to clarify the periodization, methodology, and relationship of risk assessments to the national health planning system. Second, the establishment of joint regulations between the Ministry of Health and the National Disaster Management Agency (BNPB) as a form of legally binding cross-sectoral coordination. This Joint Regulation model is commonly used to address overlapping authority between state institutions. Third, the development of national guidelines for health crisis risk assessments, which include minimum standards, risk indicators, and monitoring and evaluation mechanisms. These guidelines will serve as a technical reference for the central and regional governments.

5. Theoretical Basis for Harmonization: Legal Certainty, the Principle of Preference, and a Human Rights-Based Rule of Law

Theoretically, this harmonization is based on the theory of legal certainty, which demands consistency and clarity of norms. Furthermore, the application of the principles of legal preference, lex superior, lex specialis, and lex posterior, is crucial in determining which norms should take precedence in regulatory conflicts. Furthermore, as a human rights-based rule of law, Indonesia has an obligation to ensure that every health crisis mitigation policy supports the fulfillment of the right to health and the right to life. Pre-crisis risk assessments are therefore part of the state's constitutional and international obligations, not simply a policy option.

CONCLUSION

Based on the results of the normative analysis of laws and regulations, theoretical studies, and empirical data in Chapter IV, the following conclusions can be drawn:

1. First Conclusion

The regulation of health crisis risk assessments during the pre-crisis mitigation phase within Indonesia's positive legal system has not been harmoniously developed and does not provide adequate legal certainty. This is demonstrated by the disharmony of norms between the health legal regime and the disaster legal regime, particularly between Law Number 17 of 2003 concerning Health, Law Number 24 of 2007 concerning Disaster Management, Minister of Health Regulation Number 75 of 2019, and Regulation of the Head of the National Disaster Management Agency (BNPB) Number 02 of 2012. This disharmony is evident in the differing timeframes for risk assessments, the lack of uniform national standards, and the unclear position of health crisis risk assessments as a pre-disaster mitigation instrument. This situation reflects the suboptimal application of the theory of norm hierarchy and the principle of legal preference in policy formulation, thus opening up space for normal conflicts and weakening the consistency of the legal system in health crisis mitigation.

2. Second Conclusion

The implementation of health crisis risk assessments at Community Health Centers (Puskesmas), as primary healthcare facilities, has not been uniform, systematic, or sustainable. Field practice shows significant variation in the format of risk assessment documents, their validity periods, renewal mechanisms, and the implementation of risk mapping and preparedness. Some Community Health Centers have compiled risk assessments periodically and integrated them with contingency plans, while others remain administrative, stagnant, or heavily dependent on accreditation requirements and instructions from the central government. This situation indicates that the legal enforceability of risk assessments remains weak, both socially and factually, as stated in the theory of legal validity. Consequently, risk assessments have not fully served as a basis for effective pre-crisis mitigation decisions at the primary healthcare level.

3. Third Conclusion

From a human rights perspective, the regulation and implementation of health crisis risk assessments have the potential to hinder the fulfillment of the right to health and the right to life, as guaranteed in Article 28h paragraph (1) of the 1945 Constitution of the Republic of Indonesia and Article 12 of the International Covenant on Economic, Social and Cultural Rights (ICESCR). Suboptimal pre-crisis risk assessments result in the failure to fulfill the principles of availability, accessibility, acceptability, and quality of health services, particularly for vulnerable groups such as the elderly, pregnant women, children, and persons with disabilities. Therefore, pre-crisis health crisis risk assessments cannot be viewed solely as an administrative obligation, but must be positioned as an instrument of the state's obligation to respect, protect, and fulfill the public's right to health.

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